MONTHLY REPORT

OF

THE DEPARTMENT OF AGRICULTURE,

FOR

MARCH, 1868.

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MONTHLY REPORT.

WASHINGTON, D. C., *March* 31, 1868.

SIR: I herewith report the matter for publication in the monthly issue for March, as indicated by the following captions: Special Statistics of Farm Resources and Products; Number and Prices of Farm Stock; Universal Exposition of Agricultural Implements; The Cotton Supply; Agriculture in New Jersey; Pork Packing in 1867–'68; Business and Resources of Denver; Farm Statistics of Great Britain; Culture and Products of the Vine in Europe; and Meteorology.

Respectfully,

J. R. DODGE, *Statistician.*

Hon. HORACE CAPRON,
Commissioner of Agriculture.

SPECIAL STATISTICS OF FARM RESOURCES AND PRODUCTS.

Continued.

1. What is the average percentage of increase (or decrease, if cases of decrease exist) in the price of farm lands in your county since 1860?

2. What is the average value of wild or unimproved tracts of land; and what is the character, quality, and capabilities of such land?

3. What marked or peculiar resources have you in soil, timber, or minerals; and what is the state of their development, or inducement for attempted development?

4. What crops, if any, are made a specialty in your county; and what facts illustrating their culture, quantity, and the profit derived?

5. What kinds of wheat are cultivated; and which of them are preferred; and why? What is the time of drilling or sowing? For harvesting? And what is the amount and mode of culture? What proportion is drilled?

6. What grasses are natural to your pastures? How many months can farm animals feed exclusively in pastures? What would be a fair estimate, per head, of the cost of a season's pasturage of an average herd of cattle?

7. What are the capabilities of your county for fruit? What fruits are best adapted to your soil and climate? Give some *facts* concerning yield and profit.

MISSISSIPPI.

1. Returns from Mississippi indicate a large decrease in value of farm lands as compared with the valuation of 1860. De Soto and Tippah, in the extreme northern part of the State, show a decrease of 75 and 50 per cent., respectively, attributed almost entirely to the unsettled condition of political and financial affairs, and the disastrous results of the cotton culture of the past. In De Soto, one year ago, farming lands would sell for about three-fourths their value in 1860, but the financial distress, consequent upon the fall of cotton prices, has thrown a

illustrates very fairly the proportionate product of the whole cotton-growing belt in those years. He says:

The yield in 1860 was 40,000 bales; in 1866, 16,000; and in 1867, about 20,000. In 1866, the culture of cotton yielded a fair profit; in 1867 not one pound has paid the cost of production.

He further says:

Wheat grows well here, and can be produced in quantities to yield a good profit—the average yield being about ten bushels per acre. Our best lands yield from fifteen to twenty bushels, and by manuring a greater yield may be realized from average lands. But wheat and cotton cannot be grown by the same set of hands, because the sowing season of wheat conflicts with the picking of cotton, and the harvesting of wheat comes at the most important season for working and thinning the cotton plant, a few days in the early part of June being the most important of any in the whole cultivating season.

5. In the rich alluvial soils of Washington county "wheat was grown during the war, and its yield was thirty bushels per acre." White and red varieties have been grown to some extent in Yazoo; white preferred, as less liable to rust. In Leake a preference is given to the hardier red wheat. Red wheat is preferred in Winston. In Pike little attention is paid to wheat, "though the grain is plump and the bran is thinner than in more northern latitudes." In De Soto "wheat has never been to any extent an article made for market, though the county has two or three times before 1860 sent the first to the St. Louis market. In 1860 fully half the flour consumed was grown here; in 1866 and 1867 very little was grown, though the land in wheat in 1867 yielded a good crop. A very large breadth of land is now in wheat." The usual time of sowing is between the 15th of October and first of November, though many sow in the early part of October, and some in the latter portion of September. The time of harvesting is generally the last week in May; early varieties, with good season, are cut somewhat earlier. There is no such thing as drilling wheat known in the State, unless as a rare exception. No case of drilling is noticed in the reports. The culture is primitive, if not rude. In Winston the wheat is ploughed in after sowing, without any preparation whatever. In Yazoo it is reported that the ground is ploughed before sowing, and then harrowed in. In Attala the first process is sowing, followed by ploughing and harrowing. Other counties adopt these various modes of culture.

6. In De Soto returns represent that "our indigenous grasses are 'Nimble Will' and crab grass, the latter a fine juicy grass which comes up in May, and grows with great luxuriance on ploughed lands until frost, and may be cut two or three times. It comes up after wheat, and by the use of manure, such as plaster, could be cut once or twice after harvest, and make a good yield. It is equal to any hay in the world when properly saved. It is an annual and our finest native grass. 'Nimble Will' grows only on rich fresh land. For summer grazing we have nothing equal to the 'Bermuda grass,' a joint grass which has no seed. Except under very favorable circumstances it does not get high enough to cut for hay, but no amount of grazing hurts it; it will grow on until frost, no matter how hot or dry the season may be. Most persons fear it as too difficult to eradicate; many think it the finest grass of the south" The length of the season is variously stated, from 6 to 12 months. The fact is, that stock are never fed to any appreciable extent, with the exception of horses and mules. Sheep and cattle pick up their living in the winter months, as in summer. It is true that sheep and horned stock, as well as horses, are sometimes treated to occasional winter pasturage upon rye or barley sown in September. With this help it is possible to keep large flocks of sheep, with little expense; and other kinds of farm animals may be brought through the winter in good condition without other feed. The price of pasturage is estimated at very low rates; in some counties as low as $2 or $3 per season, while others range higher, up to $1 per month.

7. Figs and peaches everywhere abound, growing rapidly and bearing pro-

fusely and surely. Until lately no profit was derived from them, and now only on the line of railroad running lengthwise through the State. Formerly peaches were pecuniarily profitable only in pork-making. The crop is very sure in the southern part of the State; in the northern it is sometimes injured by frosts. Apples do pretty well, if kinds are selected which are suited to the climate. Small fruits produce in great abundance. The pear is apt to blight, but is favorably mentioned in some localities. Grapes do well in the poorest soils, and are free from disease. The Hartford, Prolific, Lenoir, Diana, Concord, and Catawba are mentioned with approval in the southern part of the State. Our correspondent in Washington says:

The peach succeeds here remarkably well; the trees are often from a foot to 15 inches in diameter, and I know some 18 years old. One tree will yield more fruit than four in New Jersey.

TEXAS.

1. The decline in the value of farm lands in Texas since the census of 1860 appears not so great as in most of the southern States, though the same causes which have been active in depreciating real estate in the latter have been seriously felt in many counties of Texas. Anderson and Victoria report an average decrease of 70 to 80 per cent.; Dallas, Falls, Nacogdoches, Goliad, Blanco, De Witt, Colorado, and Lavaca, about 50 per cent.; Collin, Cherokee, and Hardin 25 to 33 per cent.; Houston and Navarro, 25; Ellis, 20; Williamson, 10 per cent. Bell, Gillespie, Lampasas, Burnet, Nueces, and Cameron report no material change since 1860, while Washington reports a general increase of 5 per cent., though in some localities it is over 100 per cent., and Hays and Coryelle about 10 per cent. From the estimates of reporters the average decline in values of farm lands in the entire State is from 25 to 30 per cent. Many correspondents express the opinion that the depreciation is but temporary, and that lands generally will soon command the prices of 1860. Our Hopkins reporter says:

If the cotton crop had been good, or if it had brought a good price, I think lands would now stand as high as before the war; but as it is, they are 25 per cent. lower.

From Fayette, one of the central counties, our reporter writes:

In 1849 the general assessed value of lands averaged $1 33 per acre; 1850, $1 24; 1851 $1 70; 1852, $2 33; 1853, $2 35; 1854, $2 70; 1855, $2 84; $1856, $3 23; 1857, $3 44 1858, $4 97; 1859, $4 23; 1860, $5 42; 1861, $7; 1862, $6 15; 1863, $6 27; 1864, $5 83; 1865, $4 23; 1866, $4 50; 1867, $5 50. Total number of acres assessed 400,000, valued at $2,200,000 in 1867. Average of improved lands $10 per acre.

From Cameron county, the extreme southern point of the State, our correspondent writes:

Farm lands as they exist in other parts of our country are never sold here. The only lands worked are the river bottoms, and as our lands were originally granted to settlers and sold to purchasers by the authorities of Spain and Mexico, previous to the extension of our boundary to the Rio Grande, they were donated in tracts or rights containing on an average about 4,500 acres, with an average frontage on the river of about 1,000 yards. These lands are held by the descendants of the original settlers and their assignees, and where they remain in common or have been partitioned the right of the heir or assigns bears the proportion in frontage to the original tract that the heir bears to the original grantee. Many of the families have been very prolific, and it is not rare to find a person who owns from 10 to 15 yards river front, with a depth of 15 miles. The consequence is, if a man wishes to purchase a farm of 300 or 400 yards frontage on the river, he must buy 1,200 to 2,000 acres of land, 19-20 of which is wild land. Such lands are worth at present about the same as in 1860.

2. Wild or unimproved lands range in price from 12½ cents to $10 per acre, and embrace a very large proportion of the total area of the State, less than two per cent. being under cultivation in 1860, the census figures standing: improved land in farms, 2,650,781 acres; unimproved land in farms, 22,693,247 acres; wild or waste areas, (including water areas, &c.,) 126,541,412 acres. These lands, when owned by the State, may be had for the price of the certifi-

cate issued from the land office at Austin. Where lands are held by individuals under Spanish or Mexican grants, they may be bought in large tracts as low as 12½ cents per acre, while small tracts held under patents from the State are held at 50 cents to $1 per acre. As a matter of course much of this class of lands is equal to any under cultivation, and capable of producing as good crops as can be raised in the State. Being found in almost if not all the counties in proportions greater than the improved lands, these tracts possess the peculiarities of soil and resources common to their respective locations. In Hopkins county in the northern part of the State, the average price is about $3 per acre, the southern and eastern portion being timbered, the northern and western prairie. Ellis, Navarro, and Dallas, $1 to $5; soil black, waxy, capable of producing large crops of corn, wheat, rye, oats, barley, cotton, tobacco, &c. Anderson, value nominal, not exceeding 50 cents per acre, and capable of producing 1,000 pounds cotton to the acre, 40 bushes corn, 20 bushels wheat, 30 bushels oats. Hardin and Cherokee, $1 to $2; either timber or prairie, much of it very fertile. Houston, $1; will produce 25 bushels corn or 900 pounds seed cotton to the acre. Trinity, generally held at $2 to $4, some large tracts to be had at 50 cents; lands good for cotton, corn, potatoes, tobacco, sugar, rice, &c. Falls, $3 per acre, suited to corn and cotton. McLennan, in tracts of 160 acres $2, and $1 50 for larger tracts, one-third timber, two-thirds prairie, rich in quality. Bell county, $3, rich bottoms with or without timber, black loam with or without sand. Williamson county, $1 to $5 per acre, claimed to be equal to the best in Illinois, the soil on the prairies ranging from 3 to 15 feet in depth, underlaid with a species of potter's clay, 90 per cent. good tillable land. Washington, $5 for light sandy soil, fitted for fruit culture, and $10 for good black land suitable for cotton. De Witt and Goliad, 50 cents to $5, embracing all varieties from timber bottom and rich valley prairie, to light sandy post-oak and sandy upland prairie. Cameron has much back land that may be purchased at 12½ cents per acre, but generally in large tracts, five leagues, (4,428 acres,) or else in undivided rights in tracts of that size or larger; and even though the right be not over an acre, the owner has the run of the whole tract, in some instances over 100 leagues.

3. The resources of this State have as yet been but slightly developed beyond the capabilities of the soil and the extent and quality of her timber. Of the former extracts from the reports of a few counties will give the reader a general idea in the whole State. Grayson county, in the north, reports: "This is one of the best counties in the State, the land being capable of producing almost all classes of crops, cotton, corn, wheat, rye, oats, &c." Collin: "Soil uniformly deep, jet black, very rich." Burnet: "Our soil is peculiar to the culture of such species of cactus as furnish sustenance to the *cochineal*, which insect, during certain months of the year, may be seen in great numbers on a broad-leaved variety (*opuntia*) which thrives here in great abundance even on the most sterile lands, affording at the same time a valuable food for cattle." Williamson, in the central part of the State: "Our soil is well adapted to the production of corn, wheat, barley, oats, sorghum, millet, Hungarian grass, &c. We also raise cotton, but do not get more than two-thirds as much per acre as upon the large river bottoms. We are subject to drought and partial failure of crops in consequence." Gillespie: "Our soil is generally a mixed, sandy loam, in the valleys and bottoms alluvial, and several feet deep." Fayette: "The soil of this county is adapted to every vegetable suited to the climate; soil from the poor, rocky hill, to the richest valley; from the sand bank to the most tenacious mortar when wet." Washington: "Our soil, for the most part, is so fertile that without any manure there are large crops raised every year." Cherokee, in the east, reports: "Our upland soil is very fine generally, much of it being red land and very productive. There is a large quantity of creek and branch bottom land, very fertile and easily cultivated." De Witt, in the south: "The

il of the Guadelupe valley is of exhaustless fertility, the alluvial deposit of ack humus being from three to seven feet deep in many places. In the bluffs nd platean above the second bottom are immense beds of marl, the remains of yriads of minute sea-shells." Nueces: "The soil is chiefly black, sandy loam, pable of producing corn, cotton, tobacco, sweet potatoes, and castor-oil bean abundance, but owing to the uncertainty of the seasons but little is cultivated. think the castor bean could be cultivated with success, as it stands the drought ell."

There are few counties without sufficient timber for home uses, and when eficient its absence is partially supplied with rock and stone for building and ncing purposes. Trinity reports superior timber and the finest pineries to be ound in the State. In Fayette and Lavaca the timber is heavy, principally pon the Colorado, which abounds with pecan, ash, hickory, cotton-wood, wild-each, hackberry, elm, cedar, and various oaks. In Navarro one-third of the rea is in timber, the largest red cedars, some of which are 75 feet long and nine eet in circumference, cutting seven 10-feet rail cuts to the tree. Hardin county: hree-fourths in timber, fine pines, oaks, walnut, hickory, gum, mulberry, with eavy cypress on the streams, affording lumber of all kinds and shingles in quantity. In Titus they have walnut, gum, pecan, hackberry, sassafras, persimmon, oaks in variety, hickory and pine in abundance, with seven or eight team mills in operation turning timber into lumber. There is a scarcity of timber in Lampasas and several other counties, but rocks and stones, from common sandstone to beautiful variegated marble, are found in abundance.

Of minerals iron appears to be the most abundant, so far as the State has been developed in this regard, and is found in quantity in Grayson, Titus, Cherokee, Anderson, Nacogdoches, Williamson, Gillespie, Burnet, Llano, and other counties, with comparatively little effort at development. The only large foundry now in operation in northern Texas is located in Marion county, and supplies all that section of the State with ware and machinery manufactured from the domestic ores. Cherokee is rich in iron ore; during the war two foundries were established, but one of which is now in operation—cause, want of capital. The iron ore of Burnet and Llano is said to yield 75 per cent. of pure metal, equal to the best Swedish iron, but is not worked—no capital or enterprise. Our Anderson reporter says: "There is sufficient iron ore in this county to last the United States a century." Quantities of building and other stone are reported in Coryelle and Williamson, with gypsum and water cement in the latter, copperas in Grayson. Salt, lead, zinc, copper, soapstone, and marble are reported in Burnet, a block of the latter having been furnished for the Washington monument, at Washington, D. C.

Salt is found in several other counties. Our Cameron correspondent writes:

In the prairie lands salt-ponds and lagoons abound, where in dry seasons salt is deposited in immense quantities. During the late war Texas and Upper Louisiana were supplied from this source. In addition there are two salt lakes, one called Sal Viejo, or Old Salt, on the edge of this county and in Hidalgo, and another called El Sal del Rey, or the King's Salt, a few miles to the westward, in Hidalgo county. An analysis of the latter by Dr. D. Riddle, of the State geological survey, in 1860, resulted as follows:

Matter insoluble	0.5103
Sulphate magnesia	Trace.
Chloride sodium	99.0897
	99.6

which I believe to be the purest salt in the world; and in quantity it is inexhaustible. Until 1848 the Lake Sal del Rey furnished salt to nearly all of northern Mexico. Immense quantities were used in the process of extracting silver—the Patio process; and even up to 1858 I have noticed in the large mining towns of northern Mexico the placard of "salt from the Sal del Rey for sale," in the shops. All the labor required to obtain it is, in the dry season, to break it out of the cake into which the lake crystallizes, to the thickness of five or six inches, which breaking is done with crowbars: or, in the wet season, to wade out into the lake and break it out, the depth of water sometimes being as much as three feet. The shell, or cake

at these times is not above four inches thick. No other labor has ever been expended; n evaporators or works of any kind—nature does it all. This lake is not over 50 miles in direct line from Point Isabel and the harbor of Brazos Santiago. The country is very ne a dead level, principally prairie; and if a railroad should be built, it is my opinion th Turk's island would be less frequented by American vessels in quest of salt, and our po and beef packers could always obtain the purest salt from our own country. One thing certain, we have the salt, and if those who need it will build the road, they can obtain a they want, and more conveniently than from any other source within my knowledge.

In Lampasas county salt and sulphur springs abound, with salt works operation, which, our correspondent writes, "with indifferent management pr duce from 30 to 40 bushels of fine grade salt per day." "The sulphur spring in the vicinity of the town of Lampasas are much resorted to by invalids, ov 800 visiting them last season." In speaking of Sour lake, in Hardin county our correspondent states that "it has been a place of resort for invalids fo many years, and it is claimed that the use of the waters will cure a variety diseases. I have known of many wonderful cures. The lake covers abou five acres, and is three feet deep, and the water is continually in motion, cause by the bubbles made by the escaping gas. Immediately around the lake ar many springs, in some cases not more than three feet apart, all different waters and very strongly impregnated with different minerals—black, white, and re sulphur, soda, alum, magnesia, iron, salt. sulphuric acid, &c. Many of th wells have quantities of pure petroleum floating on the surface, and at times th lake is also covered. The gas in some of the springs is so strong that it wil burn readily for some minutes by applying a burning match. There are severa places around the lake where the ground is so impregnated with the oil that i is of the consistency of tar. Companies have been formed for boring purposes but as yet nothing has been done in that direction."

4. A mixed husbandry prevails to a considerable extent in Texas, embracing cotton, wheat, corn, potatoes, rice, tobacco, rye, oats, barley, &c., in the list o products. Titus, Hopkins, Ellis, Cherokee, De Witt, and other counties, make cotton culture a specialty; Collin, Dallas, Burnet, Bell, Gillespie, and others, are more especially devoted to wheat; Lampasas and Goliad to corn; Nueces and Refugio to corn and potatoes, and Cameron to corn and beans almost exclusively. So entirely have some sections given their attention to the production of cotton, that they have been compelled to import their breadstuffs. Our Titus correspondent says, "Nine-tenths of the flour consumed in this county has heretofore been shipped from Cincinnati and St. Louis. * * The average yield of cotton has been 800 pounds seed cotton to the acre, 18 to 20 bushels corn, and 10 to 12 bushels of wheat in the timbered regions, and 15 to 20 on the prairies. These estimates are made on lands not manured, and under cultivation for eight or ten years without rest." As in all States where land is cheap, little or no effort is made to return to the soil the properties extracted by continuous cropping, and the "skimming process" of culture has generally been followed throughout the State. Our Williamson correspondent writes: "The mode of culture and tools are of the most ancient character, with here and there a noteworthy exception. The success of the innovators is like a light breaking in upon the old processes. There is now much inquiry for the best gang ploughs and sulky cultivators, harvesters and threshers, and enough have been introduced to insure a revolution in farming operations." Large quantities of sorghum sirup of superior quality are made in this county, and our correspondent says "the cane is cut two or three times during the season, and is one of our most profitable crops, the sirup selling at 50 to 75 cents per gallon."

In Burnet county "wheat yields best on the beach soil, and in favorable seasons averages 15 bushels to the acre; on the red loam somewhat less. Corn and rye on the loamy soils of the Colorado are considered sure crops. On irrigated lands sweet potatoes do well, 300 bushels being considered a good crop" Our correspondent estimates the value of the average wheat crop as above

amed at $15 per acre, expenses $5, leaving a net profit of $10 per acre; about e same profit in corn, with more certainty. He adds: "The net profit of heat culture would be enhanced by the introduction of improved implements, hich are rarely seen here." In Coryelle "the crops, with few exceptions, are altivated in the most negligent manner, and the county is 100 years behind the mes." In Hays county "cotton and corn are the specialties, the latter proving he most profitable the past season, yielding a net profit of $5 per acre in coin; otton paid $4 per acre."

From Fayette our correspondent writes:

Corn is cultivated in various ways; some break up their land with the common turning ough, and others bed or list up their lands and plant in the water furrow by drilliug, or checks three and one-half to four feet each way. Those who break up their land in a ass either drill or plant in checks, as described. Some run a furrow between the old rows the previous year, drill the corn, and then bed the land on the same, and bush or harrow over. As soon as the corn is up two or three blades high it is generally run arouud with bull-tongne plough, and split ont the middle with a turning plongh the first ploughing. orn can be made to grow from 50 to 60 bushels to the acre, with proper treatment.

De Witt county averages half a bale of cotton and 25 bushels of corn to the cre, without manure, but two bales of cotton of 300 pounds each and 80 bushels f corn per acre have been made in a favorable season. Our correspondent says:

The soil and climate of this county is peculiarly adapted to the culture of sorghum, room corn, tobacco of the finest quality, castor beans, (the *palma christi* growing lmost to a tree,) and of all the varieties of the melon and pumpkin families. In avaca three-fourths of a bale of cotton and 30 bushels of corn are grown to the cre, on an average; oats, rye, and barley do well, but wheat is often ruined by rnst: hile of sorghnm and sugar cane, two crops are made in one year. In Goliad corn as been the only paying crop since 1860; sorghum and the castor bean are attracting conderable attention, both yielding abnndantly. In Refugio corn and sweet potatoes are about he only crops grown, and they cau scarcely be said to be cultivated, being merely planted n the most careless and slovenly manner, and left to grow as best they can, with perhaps ne ploughing; corn yielding 25 to 30 bushels per acre, potatoes 50 to 100 bnshels.

From Cameron county our correspondent writes:

The only crops cultivated to any extent are corn and beans, for home consumption. We have a soil and climate in which, in favorable seasons, two crops of corn and beans can be raised on the same land in one year, yet we rarely raise corn enough in the valley to last from one year's end to another. The mode of culture is quite primitive; the plough is a knee of timber, one end sharpened to a point and shod with iron, the other whittled down to a handle; a beam is mortised into the angle, reaching to the yoke on the cattle, penetrating about four inches, and a farmer who runs this plough plants every fourth row, making but little over two feet between the rows of corn, the hills being about the same distance in the row. It grieves a Mexican to see corn planted four feet apart in squares, as is the custom in many places, there is so much good land left idle; consequently they generally plant as described, and our rich soil makes corn for them. It generally gets two hoeings, one to clean the ground from weeds when the corn is from four to six leaves, and one to hill up when about shooting the tassel. Sometimes it gets but one hoeing. A few Mexicans plough their corn once and hoe once. Those who plough have the same forked stick, but about midway on the part that runs on the ground is mortised in on each side a piece of wood about six inches in length, curving upwards, which scrapes the ground between the rows and throws some dirt towards the plant. A few Americans are farming along the river, and where they have not degenerated into the Mexican style, make 40 to 50 bushels of corn to the acre.

5. In many parts of Texas little or no wheat has heretofore been sown, but a number of our correspondents state that the culture has attracted more attention, in view of the failure of cotton as a paying crop the past season, and that the wheat acreage of next fall will be largely increased, and that some farmers will try spring wheat this season; the latter not being grown to any extent. Of the several varieties of fall or winter wheat sown, the red May appears to be almost universally preferred, it standing sudden changes of weather better than other kinds known, and its early ripening qualities enable the crop to escape the rust and smut to a greater extent. The Tappahannock wheat, distributed by the Department of Agriculture, also finds much favor for the same reasons. Various other wheats are sown, but to limited extent; among them the Mexican, hedge row, &c. The usual time for sowing winter wheat ranges from the middle

of September to the latter part of October, but the seed is often put in thi
days later. Spring wheat is sown from the middle of January to the first
March; almost the whole acreage is sown broadcast, drilling being apparen
unknown in most sections. Winter wheat is harvested from the first of May
the middle of June, and the spring crop in June, sometimes extending i
July. Of the mode of culture our Lampasas correspondent says:

Few farmers prepare their ground before sowing, none manure, and the usual mode is
sow on the rough or stubble ground, plough in and run over with a tree-top. With
miserable culture the average yield is about 12 bushels to the acre.

This system seems widely prevalent in the State, and the only wonder is th
the average yield reaches the figures named—the crop of 1866 being estimated
12 bushels to the acre; with proper cultivation the yield could doubtless
doubled.

In recommending early sowing, our Burnet correspondent writes:

By sowing early, the wheat becomes better stocked before cold weather sets in. It th
becomes a valuable winter pasture, yielding nevertheless a crop. I think pasturing pro
disadvantageous to the growth of the wheat, except in cases where wheat is too forw
in the spring, when it is likely to be killed by frost. Precaution, therefore, requires
wheat to be kept down by pasturing. An experienced farmer informs me that the pasturi
of his wheat-field had paid him for seed and work, and still he made a crop of fifteen bu
els of wheat to the acre. I do not recommend this practice, however.

6. Natural grasses are found in great variety in this State, many of the
classed under local names, and millions of acres of woodland and prairie a
covered with a luxuriant growth, which furnishes common pasture f
innumerable herds throughout the year. Wire-grass, millet, clover, prair
grass, Bermuda, musquit, sedge, crab-grass, sage, buffalo, rescue, &c., &c., a
named by our correspondents in the various counties, and of the cultivat
grasses Hungarian appears to be most successful, several northern clovers an
grasses having proved failures, owing, perhaps, to the extended drought
There is so much land in common upon which the wild grasses grow, that se
dom other than milch cows are kept in pastures, and those only in winte
During eight or nine months of the year the range is fine, and cattle, horse
and sheep keep very fat, and dry cattle do well the balance of the year. O
Hopkins county correspondent writes:

We depend principally upon the wild grasses, which are very luxuriant, many raisi
their crops "upon the grass," as it is termed, working the teams in the daytime and lettir
them gather their living upon the prairies at night. Many animals live exclusively on th
prairies, with no care or attention from their owners, except marking and branding in th
spring, when young, and never seeing them again until old enough for market. For nin
months of the year these natural pastures are sufficient to keep both horses and cattle, n
only living, but fat. The cost may be set down at nothing, as many own hundreds of ca
tle without seeing them more than once a year, though under such circumstances many stra
off and cost time and money to get them back.

In DeWitt county they have a great variety of native grasses, our corre
spondent having gathered thirteen distinct sorts in a neglected garden of half a
acre. He reports a species of millet grass, which appeared spontaneously i
their fields about ten years ago: "It generally comes up after corn is laid by
and grows rapidly, maturing in about eight weeks. It stands from three to fiv
feet high, and very thick, affording an immense yield to the acre. It is cu
with scythes out of the corn rows, and makes very fine hay, horses preferrin
it to the best blade fodder. The seeds are like millet, but larger, and are liabl
to shed off if not cut pretty green. Some German farmers leave out a piece o
farm land, giving it frequent ploughings and harrowings while working their corn
when this grass springs up and yields an immense crop, which they cut witl
their mowing-machines. Our botanists class this grass as a new variety unde
the name of '*Panicum Texanum.*'" The same correspondent adds:

Sheep in this county are a considerable interest. We own about 100,000 head, principally
grade merinos. From neglect during the war, and poverty since, we have suffered ou
flocks to degenerate. Three pounds of wool to the fleece is about the average yield, worth

10 to 12½ cents per pound in specie. Sheep are liable to no disease except scab, which sily cured. Dogs or wolves seldom kill them.

n speaking of the cost of pasturing stock, our Cameron correspondent says:

person who owns no land, and wishes to hire pasturage for cattle, can obtain it of the ed proprietor in this wise: Suppose a man has 100 head of cattle, his rent for land, for ses, pasturage, pens, &c., will be $10 a year. This rent holds good until he has 150 head, n another $10 will be added, as for 200, and so on, fractions of less than 50 not being nted. Horse pasturage the same; sheep $1 per hundred.

7. The capabilities of Texas as a fruit-growing State have never had a fair t as yet, little attention generally having been paid to the culture; but, with exceptions, our correspondents report success upon the small scale upon ich experiments have been tried, including peaches, apples, pears, plums, erries, figs, grapes, small berry fruits, &c.—peaches and grapes appearing to ve the preference in most localities. In Titus fine crops of peaches are pro-ced in three years from the seed. This fruit is also raised to perfection and quantity in Collin, Dallas, Washington, Trinity, McLennan, Hardin, Hop-ns, Cameron, and other counties, though the crop is frequently injured by the sts in some localities. Apples have not been cultivated to much extent, m the impression that they would not do well, but success is removing this ea, and the culture is increasing. In Grayson county, last year, an orchard about six acres yielded about $800 worth of fruit, and the same in 1865, the st bearing year. Our Collin correspondent writes:

I have never seen finer apples than specimens raised in this county, but the tree is subject what is called root-mould, which destroys many trees.

From Hopkins county our reporter writes:

The opinion that apples will not do well here is giving way before successful attempts to raise em. To those who succeed profits are large, as the fruit sells readily at from $3 50 to $6 er bushel, or from 50 to 75 cents per dozen.

Grapes are reported as peculiarly successful throughout the State, growing ild and abundantly in many localities; and foreign varieties do well wherever ineyards have been set out. The "Mustang" grape grows in great luxuriance, nd is found to be one of the most prolific varieties known. It grows on the orders of many of the streams in great abundance, and is said to make an xcellent wine. The woods abound with varieties of these wild grapes, and ur Hopkins correspondent says that "no climate can be much better adapted o the culture, and Texas must soon become a wine-producing country." Our DeWitt reporter thinks that nature has pointed out that region as peculiarly dapted to the vine, and adds:

The Mustang grape grows everywhere with the utmost luxuriance, and yields an mmense crop. It makes a good, wholesome wine, or, when distilled, the best and purest Cognac brandy. * * * Cultivated vines, of nearly all known varieties, have been tried, nd all succeed except the Scuppernong, for which the climate is too dry, and perhaps the oil is too limy. * * A German on the Coletto made, from an acre and a half of Catawbas, the fourth year from planting the cuttings, about 500 gallons of excellent wine. The cultnre of the vine and the care of sheep can be advantageously united, our country being peculiarly adapted for both occupations.

Vineyards are being planted in Washington and neighboring counties, promising in a few years to be an important business in that section. The Delaware, Concord, Hartford Prolific, and others of this class, ripen in July. In the northern part of the State the Catawba ripens about the 1st of August. In Navarro "the Mustang grape, large as the Catawba, is the most prolific. This grape is not subject to mould, and it is not unlikely that, at a future day, this will be a large wine-producing country." There is no market for fruits generally, though peaches are dried with profit, commanding three dollars to five dollars per bushel. Apples find ready sale at large prices. Grayson county raises fine pears, some of them weighing as high as 21 ounces. Pecan, hickory nuts, &c., yield largely in some sections. From Gillespie county alone this year over 6,000 bushels of pecans have been gathered and shipped, and 12,000 bushels the preceding season, worth from $2 to $3 per bushel.

TENNESSEE.

1. Our returns from Tennessee indicate a general decline of 15 to 20 per cen in the value of farm lands, as compared with the census estimates of 1860 though several counties report no appreciable change, while others report a active advance of from 2 to 15 per cent. The heaviest decrease is reporte from Davidson and Henry counties, being about 50 per cent., though the forme reports few sales at reduced rates, unless under compulsion, while in the latte the decline is attributed to "the dilapidated condition of houses and fencing, an the wild growths consequent upon the war, together with high taxes," &c Weakley and Meigs report 40 per cent. decline; Rhea and Lincoln, 33; Hay wood, 30; Hawkins, Monroe, Polk, Coffee, Perry, 20; Hickman, 16; Bledso and Giles, 10; Greene, 3 to 5; while Williamson, Union, and McNairy remair at about the same figures as in 1860; Montgomery reports 2 per cent. increase Sevier and Campbell, 10 per cent.; and Marion from 10 to 15 per cent. Our Rhea correspondent says: "The great bulk of land in this county for the last 50 years has been in the hands of a few owners, and it increases in price when there is little tax to be paid, and decreases when the taxes are greater; hence the present decline." The same general causes, however, which have tended to depreciate real estate, and particularly farm lands, in the southern States, have operated in Tennessee, though not to the same extent, nor is it probable that a return to former values will be so long delayed, there being less necessity to sacrifice and not so strong a disposition to sell at any price.

2. Wild or unimproved lands are variously quoted from six cents per acre upwards, according to location, quality, and capabilities. Much of this class of lands in the eastern counties is mountainous or hilly, with coves of rich lands, upon which cattle and sheep grow fat from May until September. On these mountain lands there is considerable valuable timber, and when cleared much of the land is very productive of corn and other crops, and suited to grazing purposes. In Greene county such lands are worth from six cents to $1 per acre; in Hawkins the average is given at $3 per acre; Sevier, 50 cents to $1. In Union, ridge land, thin-soiled, capable of producing 20 bushels of corn or eight bushels of wheat, $2 50 per acre; Campbell, $1 50—mountainous, variety of soil, a good portion susceptible of improvement, adapted to the growth of clover, timothy, &c. Lands of the same general character in Monroe and Polk, 50 cents to $1 per acre; Meigs, $2 per acre—broken, gravelly, and generally poor; Rhea, $1 to $4—varying much in quality, being second bottom, upland, ridge, and mountain lands, generally well timbered, with good water, and healthy, and capable of producing corn, wheat, barley, &c., and excellent for fruits and tobacco. Bledsoe, about 50 cents per acre—soil thin, but good for grazing, and for raising vegetables when cultivated; Marion, $1 per acre, in great quantity—red, sandy loam, rich and strong—will produce grain and fruit. Coffee county, $1 to $3, comprising half the county—table lands—will produce corn, wheat, rye, oats, potatoes, vegetables, &c.; well managed valley and hill lands, without manure, will yield 50 to 60 bushels of corn and 20 to 25 bushels of wheat to the acre. Lincoln, $1 per acre, embracing an area of 100 square miles—soil thin, needing lime; fruits, especially the peach, grow to perfection; these lands lie 200 to 300 feet above the bed of the Elk river, on which are situated the best lands of the county. Giles—large tracts in timber at from $1 to $5 per acre. In Montgomery, Stewart, and Dickson there are large tracts of what are called "furnace lands," said by our correspondent to be comparatively valueless, except for coaling and sheep raising; they are high and well timbered, however. Hickman reports as low as 25 cents per acre—soil generally thin, but timbered and capable of improvement. Perry, $1 per acre—bottoms level and exceedingly fertile, upland rolling and tolerably productive; 75 per cent. of the whole susceptible of improvement. McNairy, $5 per acre—one-third good bottom, two-thirds for grazing and timber. Haywood, $3 to $8; the greater portion in

Hatchie and Forked Deer river bottoms subject to overflow, and thus rened unfit for farming purposes, yet they abound in the finest white-oak and ress timber; if the rivers could be leveed and the overflow regulated, these toms would make the finest farms, the soil being very rich and fertile. akley county, $4 to $15 per acre—capable of producing 30 to 50 bushels of n per acre, 600 to 1,000 pounds tobacco, 15 to 20 bushels oats, 10 to 20 shels wheat, 600 to 1,000 pounds seed cotton, and vegetables in abundance. Henry county our correspondent reports little land under this head, the nty being well settled up; the price for such as may be found he averages at per acre.

. The mineral resources of Tennessee are developed to but a limited extent, ugh her hills and mountains contain stores of iron, of coal, and of copper, of c, of sandstone, and of the finest marble, awaiting the capital, enterprise, and or that shall dig out and utilize these dormant mines of wealth. Iron ore is nd in great abundance in nearly all the counties of eastern and middle nnessee; copper, in Greene, Sevier, Polk, Perry, and other counties; coal, the mountains of Campbell, Rhea, Marion, &c.; some gold is reported in lk; salts, in Greene and Hawkins; lead, in Perry; fine marble and building nes, in Hawkins, Campbell, Monroe, Meigs, Giles, and Williamson; thick atum of shale in Coffee, &c., &c. The timber resources are also extensive, bracing a great variety, and many of the finest quality of forest trees—hickory, e various oaks, poplar, walnut, ash, beech, chestnut, locust, cedar, sugar, pine, c., which cover a large portion of the vast tracts classed "wild or unimproved nds," and to be purchased at the figures named above for such. The soil nges from that of the deep rich bottoms, of exhaustless fertility, to light and lly uplands, which require high culture to become productive.

In a number of counties the iron interest has been partially developed. In reene one furnace is in operation, and a northern company have purchased veral thousand acres of ore lands and will soon have extensive works comleted. Near the town of Greeneville there is a bed of sulphate of iron, from hich copperas was made during the war, and where even the clay is impregated with the mineral. Our Montgomery correspondent says "that within venty-five miles of Clarksville there are from ten to twenty furnaces lying idle r want of capital; most of them were burned during the war, and the proietors, being unable to rebuild and run them, would sell out very low."

The zinc of Greene county is said to be very rich; during the war Epsom alts were also made to some extent in the mountains. In Hawkins, our corespondent states, "there is an underground stream of salt water traversing the alley, which has been tapped at several points, at one of which the manuacture of salt has been successfully prosecuted for a number of years, though ot upon a large scale; but it is thought that, with capital and enterprise, it ight be made to rival the salt wells of southwestern Virginia in the production of his valuable product. * * * A most beautiful quality of marble is found t various points in this county, one quarry of which was worked to a conderable extent before the war. Much capital might be profitably invested nd many laborers usefully employed in the manufacture and preparation for narket of the two articles named—salt and marble—as well as iron, the ore of vhich is present in the mountains." Our Marion correspondent says "the quanity of bituminous and semi-bituminous coal and iron ore in this county is nlimited, with but little development of the former and none of the latter, hough the inducements are great, produce being abundant and transportation good and improving."

Our Coffee county correspondent writes:

A stratum of black aluminous shale, at least twenty feet thick, underlies the whole of the table lands of this county, and crops out in the foot hills. It burns with a brilliancy equal to the best bituminous coal, but does not burn to ashes, nor does it do for smiths. It may be valuable, but we do not regard it in the least so.

A number of our reporters speak of the many eligible water-power sites to be found upon the innumerable rivers and mountain streams of the State. From Sevier county our correspondent writes:

Our water-power cannot be surpassed in the world. There are three branches of the Little Pigeon river running through this county, running from the Smoky or Iron mountain, upon the banks of which you cannot go amiss for choice sites for manufacturing establishments.

Our Haywood correspondent, in speaking of the formation of that county, says:

Often, at the depth of 100 feet, we discover large trees, mostly of the oak and cottonwood species. Sea shells are often found in digging wells, also various other relics of a former condition of this country. In many places large tumuli or mounds are to be found, some twenty, some thirty, and others fifty feet high. These mounds always contain something—human bones, old pottery-ware, arrow-heads, curiously wrought devices in rocks, &c. In Lauderdale county, immediately west of this county, in the Mississippi bottom, a very extensive burying-ground has been discovered, unknown in extent, where thousands of human bones are found, belonging to a race of people at least two feet higher than the present generation.

Very few counties of this State can be said to make a specialty of any one crop, a mixed husbandry generally prevailing. Wheat, corn, oats, potatoes, sorghum, &c., are grown successfully in all sections, while cotton and tobacco are largely cultivated in some localities. In a majority of counties corn and wheat are the leading crops, the former being fed largely to stock. In Monroe "corn and wheat are the staples; the best hommock and intervale lands produce, with good cultivation, 40 to 50 bushels of corn to the acre, at an average cost of 20 cents per bushel; and, when well put in on a good clover sod, wheat yields 15 to 30 bushels, at a cost of $4 per acre, including seed." Corn is made the chief crop, because the surest. Corn is also the specialty in Rhea county; "it requires a man and a horse on an average about four days' labor per acre to make corn, and the usual yield is 30 to 35 bushels per acre." Our correspondent says of the profits:

This year a man's work four days with horse, &c., would be $6; one acre of corn, say 35 bushels, at 60 cents, $21: making a net profit of $15 per acre. A man can easily till 20 acres in corn, giving a net profit of $300, besides harvesting his small grain and hay.

Bledsoe reports 25 bushels corn and six bushels of wheat as the average per acre. Marion "bottom lands yield about 30 bushels corn, upland 10 bushels, but can be made to produce three times as much by proper cultivation, the mode of culture being of the lowest grade; except in a few instances the soil is not broken up or disturbed below two and a half to three inches, and not two-thirds of the surface." Our Coffee correspondent says:

Corn for the rearing and fattening of stock has for some time been our principal crop, and hogs the largest item of profit from it. Wheat, as an article for export, is receiving more attention than formerly.

Stock-raising is also a profitable branch in Williamson county. In Union, "corn pays $10 per acre, wheat $10, oats $3, potatoes $15, and sorghum $30." In Giles county, "cotton has been a specialty for the last three years. With imperfect culture 1,000 to 1,200 pounds of seed cotton per acre are produced, but those engaged in the culture for the past two years have found the debtor side of the balance sheet against them. * * Corn, wheat, rye, oats, barley, hemp, flax, tobacco, sorghum, potatoes, &c., grow to perfection; 40 to 50 bushels of corn and 15 to 25 bushels of wheat per acre being raised." McNairy: "Cotton is the special crop, though our soil is well adapted to corn, but not so well for wheat; average yield per acre, 1,000 pounds seed cotton, 40 bushels corn, 10 bushels of wheat; the profit on cotton is small, and more could be derived from grain and stock, if attention were turned to them." Lincoln county: "Cotton, corn, small grains and blue grass are the chief crops. Cotton has been grown at a loss the present year. The crop of the county reached 6,000 bales in 1867, but for 1868 it is thought there will not be sufficient land planted to raise 1,000 bales. Our farmers have not recovered their hog crops

since the war, in consequence of which, in connection with the closing up of distilleries, we have a large surplus of corn, which is now selling at 25 to 35 cents per bushel, there being no means of cheap transportation. Of 40 distilleries in the county not one is now in operation, owing to the heavy expenses under the law. Our Montgomery correspondent writes:

Tobacco has been, but stock-raising probably will be, our specialty, as the opinion is now general that there is no money in the former.

In Henry county, tobacco, wheat, and corn were the chief crops before the war, but cotton has since taken the place of tobacco, but for the future our correspondent thinks the latter will resume its old position.

One good hand can cultivate two and a half acres of tobacco, 15 acres of corn, 10 acres of wheat, three acres of herds-grass, and one in late potatoes, with the following result:

2½ acres tobacco, at 1,000 lbs. per acre, 2,500 lbs., at 8 cents	$200
15 acres corn at 40 bushels per acre, 600 bushels, at 40 cents	240
10 acres wheat, at 8 bushels per acre, 80 bushels, at $1 50	128
3 acres grass, 3,000 lbs. per acre, 9,000 lbs., at ½ cent	45
1 acre potatoes, 60 bushels per acre, at 75 cents	45
	650
Estimated expenses not more than	150
	500

The labor to raise the two and a half acres of tobacco is not more than is usually required to raise that amount of corn, but the labor in suckering and worming is much greater. The great advantage in raising this crop lies in the fact that the corn crop is harvested before there is much to do with the tobacco, except planting You house it about the 1st of September, at which time you are ready to sow your wheat; by the 1st of October all farmers ought to have their wheat in, and be ready to gather the corn; this done, your tobacco is ready for stripping and preparing for market, so that an industrious farmer can all the time he busily engaged with his crops, except a few weeks in the winter.

Peanuts are extensively grown in Perry county, yielding from 50 to 100 bushels per acre, worth from $1 to $3 per bushel, while the haulm is preferred by horses and cattle to any other kind of fodder. One hand can cultivate, gather, &c., from 1st of May to 1st of December, 10 acres of these nuts.

5. Among the many varieties of wheat cultivated in Tennessee the most prominent are the red May, Walker, Quaker, white and red Mediterranean, Tappahannock or Boughton, blue-stem, Orleans, gold-chaff, &c., little or no spring wheat being grown. In Green, Hawkins, Union, Rhea, Monroe, Polk, and other counties the Tappahannock wheat distributed by this department has become popular on account of its earliness and consequent freedom from the dangers which beset later varieties, as well as for its certainty and productiveness. White and red Mediterranean, red May, blue stem, and Walker are largely grown, and, with the Tappahannock, comprise most of the wheat crop in the State. The preference is given to the red wheats in a majority of the counties, as being the most hardy and best able to stand the cold winters, though the white is considered by many the most prolific. The seed is put in the ground from the first of September up to December, but the greater portion is sown from the middle of September to the first of November, and the crop is harvested generally in the second and third weeks in June, though in some cases commencing earlier and in others running into July. Drilling is reported in very few counties and to but limited extent, but when practiced is popular, and will doubtless soon be adopted as its advantages become known among wheat-growers of the State.

Wheat receives very little culture, seldom more than a rough and shallow breaking of the ground, a light harrowing, with the seed sown broadcast and harrowed in. In Weakley county "the seed is simply sown and ploughed in roughly with common turning ploughs; many farmers sowing lands upon which

the corn is standing." Our correspondent remarks, "if we were to sow wheat on fallow lands and put it in properly, we would add at least 50 per cent. to the product." In Perry "the only cultivation is to plough the ground and brush in the seed." Giles county, "the culture is scarcely worthy the name a plough-boy with a bull-tongue plough scratches among the standing corn.' Monroe: "We sow wheat on clover sod turned on an oat or corn stubble ploughed and harrowed in grain, top-dressing thinest spots with stable manure or leached ashes." Lincoln: "Wheat is usually ploughed in with an ordinary turning plough and occasionally harrowed." With such indifferent culture it is not surprising that in 1866 the average yield per acre was only five and three-tenth bushels, or only four bushels above the seed sown.

6. There are a variety of natural grasses in Tennessee, including musquit, blue grass, crab, fox-tail, sedge, nimble-will, &c., furnishing, in some sections of the State, with the cultivated grasses, pasture for cattle during the entire year, and at but little expense. Red-top clover and English and Kentucky blue grass are extensively sown for grazing purposes, and for the meadows, clover, timothy, red-top, orchard grass, &c., are used. Our Lincoln correspondent writes:

Blue grass is natural to our pastures, and covers our hill-sides when the undergrowth is cut off. Farm animals can feed exclusively on the pastures except during January and February, though they frequently get very short in August and September, when rains are not frequent.

In Weakley most of their cattle, sheep, and hogs live in the forests on the wild grasses from the first of April to the middle of November. Davidson county: "Blue grass is our best grass for pasturage, and will keep stock in good condition through the entire year, if dry food be furnished during the few days or weeks in which snow is on the grass." Coffee county: "Early spring and summer grasses abound on the table-lands, upon which stock, especially sheep, do quite as well from April 1 until frost, as upon cultivated pastures. Sheep husbandry, properly conducted, would prove a complete success on our cheap table-lands." In Perry, "farm animals feed exclusively on pastures the whole year—nine months on grasses, and three months on cane; the cost per head of pasturing cattle is the amount necessary to supply them with salt." Giles county: "Blue grass grows here second only to Kentucky; clover and lucerne superior to Kentucky; farm animals can feed exclusively in pastures from 1st of April to 1st December, and, if we would seed land enough in grasses, could graze and do well all the year round. The price for grazing cattle the past season has varied from $1 to $1 50 per head for the season. Our climate, in connection with our short winters, the fertility of our soil, and its adaptation to the growth of the various grasses, &c., makes it one of the most desirable portions of the Union for raising and feeding cattle."

7. Fruit culture has received comparatively little attention in Tennessee beyond raising a supply for family use or home consumption, though apples, peaches, pears, plums, the small fruits, and all fruits suited to the latitude, succeed so far as tried. Our Giles correspondent says:

Quite a variety of fruit is grown. Apples, (some 20 varieties,) peaches, pears, plums, grapes, have all been grown to perfection, with occasionally a heavy yield, taking into consideration the fact that there is no after-culture, and very little attention given them after planting out. We know of apple-trees yielding 25 to 35 bushels. Very little fruit is sold, the surplus being given to the hogs. A society has recently been organized to improve the culture of fruit.

Hawkins county: "There are few localities better adapted to fruit-growing than East Tennessee, especially for the cultivation of apples and peaches, which could be made a profitable business in this county if conducted with that care and skill necessary to success in any branch of industry; but there is generally so little attention given to orchards after the trees are planted, and the business is conducted in so careless a manner, that it would be impossible to estimate the profits; but even with the small amount of care bestowed upon them, peach trees will con-

nue to bear good crops for over 20 years." Lincoln county: "Our ridges, hills, d barren lands produce excellent fruit—apples, peaches, pears, &c. Fruits have ver been made an object of profit, except small quantities of apples and peaches stilled into brandy. In 1866 some dried peaches were exported, and, perhaps, 000 cans put up for exportation." Coffee county: "Our table-lands are ought equal to any portion of the United States for thriftiness in the growth and rability of trees, and of quantity and quality of apples, peaches, plums, &c." ur Henry correspondent writes as follows:

There is no finer fruit region than that embraced by the State of Tennessee. Our winters e cold enough to put a stop to vegetation sufficiently long to enable the tree to recuperate, d yet not so severe as to endanger the life of any but the tenderest species. Apples, aches, pears, quinces, plums, cherries, apricots, nectarines, figs, grapes, berries, melons, c., may be raised with the greatest ease and in abundance. Wild grapes are found in vast antities on the ridge and mountain lands, and also upon the table-lands, upon which, in me counties, they grow better upon the hills. Cultivated varieties have been successfully own in some localities, while in others the results have been indifferent, and in some cases scouraging.

Our Haywood county correspondent says:

The culture of grapes has received little attention, yet there is no doubt but they will do well here as anywhere on the continent, from the fact that the best wild grapes I have er seen grow throughout the whole extent of this country. A grape grows here in abund- ice called the muscadine, which produces a very superior wine.

KENTUCKY.

1. Returns from Kentucky show an average increase of about 10 per cent. in ie value of farm lands over the estimates under the census of 1860, though ie advance is by no means uniform, nor is the decline or increase confined to ny particular section of the State; as, while in Kenton, Pendleton, and Boone, the northern portion, lands have advanced from 40 to 50 per cent., Franklin unty, close at hand, reports a decline of 25 per cent., and Owen and Old- am "no change." In the western section Webster reports 10 per cent. decline; hio, Butler, and Christian, "no change." Todd and Graves a small advance, nd Livingston an advance of 10 per cent. Of the central and southern coun- es, Clinton reports 10 per cent. decline; Russell and Pulaski, "no change;" letcalfe, Whitley, and Laurel, 10 per cent. advance; Edmonson, 25 per cent. dvance; and Rockcastle, 30 per cent. advance. Thence further north, Har- in reports a decline of 25 per cent.; Spencer, 15 per cent. decline; and Fay- te, "no change;" Scott and Gallatin, a slight advance; Henry 10 per cent., Harrison 20 per cent., and Anderson 33 per cent., advance; Jefferson reports nds in vicinity of Louisville 100 per cent. higher than in 1860, but not so large a increase for lands more remote from the city. In the northeast, Lewis unty reports 30 per cent. advance, while the adjoining county of Greenup eports "no change."

2. The estimated value of wild or unimproved lands in the State varies from 1 per acre up to the price of improved lands in the several counties. Rock- astle and Pulaski are the only counties reporting as low as $1 per acre, the land the former being "poor, hilly, and heavy," and in the latter "varying from oor freestone plateaus to rich, north slopes and hollows in limestone, suited to uit culture." Lewis, Lincoln, Butler, Christian, and Graves report from $2 er acre upwards, most of those at $2 being mountainous and poor, though some re covered with heavy forest and are susceptible of improvement and will pro- uce good crops. Russell, Edmonson, Webster, Livingston, Ohio, Hardin, Laurel, reenup, and others, vary from $2 50 to $5 per acre; Anderson, Owen, Frank- n, Trimble, and Metcalfe, $5 to $10 per acre; while Todd and Pendleton esti- ate at $20, Kenton $25, Oldham $30, and Bourbon as high as $75 to $80 er acre; the higher figures representing lands in close proximity to cities, pon lines of railroad, or with valuable timber accessible to market. In Ken-

ton county the timber is good—oak, ash, black walnut, and hickory, wort much more than the price of the land, and the soil is fertile, as is generally th case in surrounding counties. In Bourbon county the lands reported are n properly under this head, being in grass, without building improvements, va ued at $75 per acre. Along the Kentucky river these unimproved lands a generally rocky and hilly and in timber, suited to grass and fruits. A portio of the soil is clay, on limestone, thin and rolling. In Anderson, most of th class is rough and hilly, of average richness, producing blue grass in abundanc and when first cleared will yield 50 to 60 bushels of corn to the acre. In Lin coln, about half the county comes under this head; high, sandy, with heav forests of oak, poplar, and chestnut, capable of producing wheat, corn, tobacc sorghum, &c. In Whitley, the creek and river bottoms are rich, the upland thin. In Russell, the soil of such lands is generally poor and thin, but suscep tible of improvement, a portion heavily timbered. In Ohio county the hil lands abound in coal and iron, and the swamps make good meadow, while th whole county is well timbered. In Graves, about one-tenth is bottom land one-fourth broken, timbered, and the remainder level, light-timbered, called bar rens. The general character of these lands is good, and much of that which i not already fertile may be readily improved and rendered highly productive i general farming, or well suited to grazing purposes.

3. Kentucky is rich in mineral resources, and her beds of coal and mountain of iron and stone are almost inexhaustible. Coal is found in abundance i Greenup, Rockcastle, Laurel, Pulaski, Whitley, Clinton, Edmonson, Hardin Ohio, Butler, Christian, Webster, and other counties. In most of these coun ties this coal is of excellent quality, but used only for home consumption, there being no means of transportation. In Laurel county the coal beds are from three to five feet in thickness. A railroad is now in progress of construction through the central part of the county, connecting with Louisville, which wil open up a market for this coal, now undeveloped for want of means of carriage to market. In Pulaski they claim to have "the best bituminous coal on the continent." Our Clinton correspondent says:

> A range of hills in the eastern part of this county, extending north and south, contain an immense amount of coal in strata of four feet in thickness.

This coal is now being worked to some extent by a company who ship to Nashville. In several counties roads are being built that will encourage the more extensive development of this interest, but as yet little has been done in that direction.

Iron is found in greater or less quantity in Greenup, Trimble, Rockcastle, Pulaski, Whitley, Russell, Clinton, Edmonson, Ohio, Butler, &c., but, like the coal deposits, has been but feebly developed. In Greenup the furnaces are closed up, ore within reach of present facilities being pretty well exhausted. Iron ore is found all through Russell county. "About 35 years since a very superior iron was manufactured here, from which some of the blacksmiths made good edged tools without steel. The iron was hard and tough. There has been no development since, and it is doubted whether the ore is in sufficient quantity to pay for working." This ore also abounds in Clinton county, and David Dale Owen, in his Geological Survey of Kentucky, in speaking of this and counties east of it, says:

> There is every reason for believing that their resources in coal and iron—staple commodities of those nations of greatest prosperity—will, when fully developed, compare favorably with those of any civilized country on the face of the earth.

In Butler county there is much iron ore, but it is said to be of the honeycomb variety, which is considered comparatively valueless. A large amount of capital could be profitably invested in utilizing the iron interest of this State.

Lead is found in Trimble, Owen, Bourbon, Scott, Franklin, Anderson, Livingston, and counties contiguous. In Anderson there is a mine said to yield

0 per cent. of lead, but the chemist making the test reported that it would not ay to work it. In Livingston, lead has been found upon the surface, but has ot been worked to any extent. Salt wells exist in several counties, but are not orked. In Clinton, says our correspondent, "a fine stream of salt water has een struck on Willis creek, in the northwest, and a company are now at work roducing salt, and the prospect is considered good. There is a fine opening r men experienced in salt making, there being an abundance of water, and mber and labor is cheap. Salt for the Nashville market and for the Cumberand river country comes from Ohio and Western Virginia. The cost of shipping salt down the Ohio and up the Cumberland is certainly much greater than own the Cumberland to Nashville." Salt water also abounds in Metcalfe, nderson, Whitley, Russell, &c. There has recently been discovered a gold ine in Anderson county, and its value is being now tested by a company. altpetre is found in Rockcastle, and limestone and freestone abound in Lewis, rimble, Clark, and other counties. Our Lewis county correspondent claim s r his county "the finest ledge of freestone from Pittsburg to Cincinnati, fro m hich nearly all the fine buildings in the latter city are now being built, and the ock of which the Cincinnati and Covington bridge was built was taken from he quarries of this county; not extensively worked, there being but one quarry n operation, employing 200 men."

The timber resources of this State are well known, the finest quality abounding in all sections, and embracing a great variety of forest trees of primitive growth, furnishing unlimited lumber supplies, as yet but partially developed. The soil of the State, however, supplies her chief source of wealth, rendering Kentucky peculiarly an agricultural and grazing country, in which latter branch she had long ranked among the first in the land.

Few farmers in Kentucky confine themselves to the culture of any one crop, and a mixed husbandry generally prevails, embracing the production of wheat, corn, oats, rye, potatoes, tobacco, the raising of stock, &c. Wheat, corn, and tobacco are the chief crops, the latter being the principal one for export, the corn grown being largely used upon the farms—converted into st ck. Our Trimble correspondent writes.

The tobacco crop in this county is the most valuable. In 1866 the product was 1,916,100 pounds, but, owing to the drought, the crop of 1867 did not reach more than half as much. The product of hay in 1866 was 826 tons; corn, 276,235 bushels wheat, 11,824 bushels; barley, 1,052 bushels.

Tobacco is also extensively grown in Owen, Franklin, Edmonson, Ohio, Christian, Webster, Pendleton, Todd, Graves, and other counties, while wheat and corn receive especial attention in Greenup, Lewis, Bourbon, Scott, Hardin, &c., and corn alone, the leading grain product, in Laurel, Oldham, Anderson, Boyle, &c. In Edmonson tobacco yields an average of about 800 pounds to the acre, with a profit of about $30 per acre. Ohio county: "Our principal and most reliable crops are tobacco and corn, upon which our farmers have mainly relied for profit; first, by the sale of their tobacco direct; second, by the sale of stock fed and fattened by their corn and hay." Todd county: "In favorable seasons the average yield of tobacco is 900 pounds. A good hand will make 3,000 pounds, which has been sold here for several years past at $12 to $15 per hundred-weight. Owing, however, to the change in the labor system, the quantity raised is annually declining." In Graves the yield and profit is about the same as in Todd county.

In Lewis county, "the best bottom lands yield from 60 to 100 bushels of corn to the acre, and wheat averages 15 bushels." Scott county: "We raise an average of 40 bushels of corn, 30 bushels of oats, and 10 to 15 bushels of wheat; this being one of the noted 'blue grass' counties, is largely devoted to grazing, and our surplus grain is consumed by stock during the winter." Laurel county: "Corn is the special crop, average 25 bushels. I last year raised on

two acres, well manured, 120 bushels of good corn." Whitley county: "Corn and wheat, crops eaten and fed to horses, cattle, and hogs, which are driven on foot to foreign markets." Oldham county: "Indian corn the chief crop; 40 bushels to the acre; net profit, $12 to $15 per acre." Henry county: "The greatest profit is derived from the corn crop, which is fed to stock, mules, steers, and hogs, affording good profits." Fayette county: "If we have any specialty it is in the fine quality of our stock; probably no section of our country can boast of finer stock than we have, and, in my judgment, mules, horses and cattle attain a higher degree of perfection here than in any other section of the Union" Boyle county: "This is a stock-raising county; but little grain is sent out of the county, most of the corn and grass raised being fed to stock. This is one of the principal mule-raising counties in the State." Harrison county: "A large portion of the corn crop, nearly all the rye and a small portion of the wheat is distilled into whiskey, there being several large distilleries in the county, making a fine market for grain, they paying this season $1 for corn and $1 15 for rye."

5. Many varieties of wheat are cultivated in Kentucky, among them white and red Mediterranean, blue stem, red May, Walker, golden chaff, smooth chaff, Tennessee, New Orleans, Rock hill, Tappahannock, Kentucky white, Georgia white, blue straw, &c., &c.; the red and white Mediterranean, blue straw, red May and Tappahannock being the varieties generally preferred. The Mediterranean is esteemed for its uniform hardiness, being less apt to freeze out than most other varieties. The white yields the most, but the red is considered the surest crop, and hence more extensively grown. In Henry county the white is preferred, "because it yields larger crops, commands higher prices, and will stand much longer after it is ripe without becoming straw-fallen or injured." Our Fayette correspondent says:

> The white varieties, when escaping rust, yield larger crops than the red, but in consequence of their more succulent straw, are much more liable to this disease and are accordingly rendered valueless: the red Mediterranean and amber yield less crops in a good season, but for a series of years are more reliable for a fair yield.

The almost universal opinion is that the white yields the largest crop under favorable circumstances, and makes a higher priced flour, but that the red is most reliable for all seasons, the former being more liable to injury by rust, the midge, &c. The red and white May, the Tappahannock, the Walker, the New Orleans, are valued for their early ripening qualities and their consequent escape from diseases and insects, to which later varieties are subject. The Tappahannock is proving successful in localities where introduced, and one correspondent says:

> The white May and the Tappahannock are preferred, the first named for its early maturity and general exemption from rust; the latter for its good yield and the preference given it in market, it usually selling 15 to 20 cents per bushel higher than other varieties.

Very little spring wheat is sown. A correspondent, however, says:

> The package sent me from the department produced so very finely that I shall sow the entire product (which was one bushel from a quart) next spring.

Wheat is generally sown broadcast from the middle of September to the middle of October, the drill being practically unknown in most of the counties, and where used putting in a small percentage of the seed. Harvesting commences as early as the middle of June, and is usually over the first week in July. But little attention is given to cultivation. In Russell and many other counties they "sow in corn land, scratching in among the corn stalks with a shovel plough, the yield being from four to ten bushels." Another correspondent says:

> The cultivation is slovenly; in land cropped with corn wheat is put in broadcast, and the ground run over with cultivators; clover, lea, aud oat stubble is ploughed three to three and a half inches in July and August, the grain sown broadcast and harrowed in.

Our Ohio county reporter says:

> The amount of our crop varies from 5 to 25 bushels per acre; our failures in wheat crops

re owing more to bad culture than defects in soil or climate. I never sowed a crop in good me, soil, and manner, without getting a good remunerative crop.

In Fayette, "probably, the larger portion of the crop is grown on land from which a crop of corn has just been taken, though such land is considered the least reliable for a good crop; oat stubble, clover land, and land upon which hemp has been grown are believed to be the best. The ordinary mode is to break the land well with a two-horse plough; if broken early in the season it lies until sowing time, when it is cross-ploughed, sown broadcast and harrowed both ways. If first broken near sowing time it is sometimes harrowed before sowing, then ploughed in with a one-horse plough and harrowed once. Upon corn stubble it is sometimes sown upon the land without ploughing, but harrowed both ways with heavy harrows; others, after the sowing, plough and harrow it in, while others first use the two-horse plough, then sow and harrow." In 1866 the average yield of wheat in this State was but six and a half bushels per acre.

6. Blue grass is the almost universal grass of Kentucky, and the "blue grass region" is too well known as a grazing country to require lengthy notice at our hands. This grass is very hardy, and if not grazed after the first of August until winter, makes excellent winter pasture; stock doing well upon it, except for the short period it may be covered by snow. White clover, crab grass, fox tail, &c., are also found, while among the cultivated grasses successfully and profitably grown are herds grass, timothy, red top, orchard grass, clover, Hungarian grass, &c. While under favorable circumstances stock may be sustained nearly the whole year upon pastures alone, the average pasture season, when cattle will do well without other feed, ranges from seven to nine months; sheep subsisting longer, and frequently the entire year. The average cost of pasture per head is given at from $1 to $2 per month, and for foddering during the winter from $2 to $2 50 per month.

7. Fruit culture has not received much attention in Kentucky, there having been no market for the crop, while in some counties our correspondents think results have been indifferent and sometimes failures when the experiment has been tried. Most of our reporters, however, claim that all fruits suited to the latitude, such as apples, peaches, pears, plumbs, quinces, small fruits and berries, &c., will do well under proper care and cultivation, and prove highly remunerative. In some sections the worm and bug have been very destructive to orchards, and discouraged attempts at fruit growing. One correspondent writes:

All the principal northern fruits grow well here, particularly the apple, peach, plum, &c. But little attention has been paid to fruit until within the last few years, but farmers are now planting good orchards of choice fruits.

Hardin county: "About one-fifth of this county is as good a fruit region as can be found in the United States, being suited to apples, peaches, grapes and all varieties of small fruit; some of our peach orchards bearing fruit that this season commanded $6 to $7 per bushel in the Louisville market. Peaches are planted about one rod apart, and yield 1½ bushels of No. 1 fruit for the first crop. This fruit averages $3 per bushel." In some of the counties where fruit does not succeed well of late years, the failure is attributed to the reduction of the forests and consequent removal of the old protection during winter. In Jefferson county "the apple, peach, pear, and all small fruits do well, except the plumb and smooth-skinned fruits, which are damaged by the curculio. The Catawba grape has failed several years, and the Concord is taking its place. There are no farms exclusively devoted to fruit, but most farmers raise sufficient for family use and a surplus to send to market The prices received in Louisville have been remunerative." Our Fayette correspondent writes:

Fruit when made a specialty soon enriches its producer if he understands his business and attends to it. A German about 20 years ago purchased 20 acres of land and erected a small house. For a few years, until his peach orchard and vineyard came into bearing, he had a

small nursery, with the proceeds of which he supported his family. He is now worth not less than $30,000, made from the proceeds of his orchard and vineyard.

WEST VIRGINIA.

1. Unlike Virginia, and the other States in the south in which the involuntary labor system existed, West Virginia shows an increase in the value of lands since 1860 amounting to an average of 32 per cent. There is some difference in this appreciation in different parts of the State, the Pan Handle and Ohio river counties being generally above the average. Hancock, Tyler, Webster and Wood, are placed at 50 per cent. Nicholas, Grant, Cabell and Mineral, are the only counties returned at rates less than those of 1860. During the oil excitement in Wood and adjacent counties, prices of farm lands were at least 100 per cent. higher than in 1860. While the actual product of oil has been increased since 1865, wild speculation has subsided, and lands in this vicinity, except those known to be oil bearing, now average about five per cent. increase over prices of the period first mentioned.

2. In the Pan Handle counties wild land is unknown. All is included in farms, and timber reservations are generally occupied as sheep pastures, the underbrush being kept clear. These "woods pastures" are often quite valuable adjuncts to the arable portion of the farms. The unimproved land, or woodland, of Harrison, is held at $20 per acre. The soil, abounding in lime and clay, "will produce anything." The location of this county is central, with a railroad passing through it. Unimproved tracts in Wood county are placed at $6 per acre. The assessment of 1866 made the average over $9. In Marshall, on the Ohio, below Wheeling, unimproved lands are worth from $6 to $25 per acre; the growth is various and valuable, and the soil productive. Iron ore and coal also abound here. The average price of unimproved lands in Kanawha is $5 per acre. The surface is generally uneven, often declivitous, but the soil is rich and suitable for all farm products, and particularly for fruits. In Mason, hill lands are worth from $8 to $10 per acre; soil, clay, slightly impregnated with lime, productive in grasses, especially blue grass, which springs up spontaneously when the land is cleared. In Jefferson, the quantity of unimproved land in 1860 was 24,384, and it may now be put down in round numbers at 20,000, worth $6 per acre. It consists principally of land lying along the western slope of the Blue Ridge mountain, valuable for its timber, much of which is chestnut. Unimproved lands in Tyler are valued at $6 per acre, in Barbour $2 to $5; in Randolph $3, adapted to grass and grain; in Nicholas $2, in Cabell $2, suitable for grazing and fruit growing; in Grant $1, good for sheep pasture and timber; in Webster 75 cents, and in Wyoming 50 cents, valuable for grape culture and wool growing.

3. The mineral resources of West Virginia are too well known for particular comment. Nearly all of the counties in the State contain coal, iron and other minerals; coal in veins suitable for working is found in greatest abundance along the banks of the upper Ohio, in the hills along the course of the Monongahela and its branches, in the central counties of the State, in the Piedmont region east of the summit, in the Kanawha valley, and in all the counties south of that river. The coal lands of Guyandotte, being bituminous, cannel and splint varieties, cover nine-tenths of the Guyandotte valley, in horizontal strata in the hills, from 3 to 11 feet thick, aggregating in some hills 25 or 30 feet. Coal mining in Kanawha is represented as paying well. The inducement for employing capital under practical supervision is claimed to be very flattering, while complaint is made of the visionary character of recent coal and oil operations. Of Brooke our correspondent says:

The most valuable mineral, however, is bituminous coal, aeeessible by level adits over the greater part of the county. The stratum is four to five feet thick. In the hill fronting on the Ohio river it is about 200 feet above the river level, and the coal is let down by railways

boats for shipment. Off from the river it is mined merely for home consumption. As soon railways are made up the valleys an immense supply can be obtained. About 300 feet neath the river level there is another stratum, some six or seven feet in thickness, of perior coal, which has been mined by shafts or galleries at Steubenville, and at Rust Run, the opposite side of the river. A company was formed a short time ago to mine this coal Wellsburg, our county seat, but they have as yet failed to commence. This coal is almost holly free from sulphur, and on that account admirably fitted for working iron.

Iron ore of various descriptions, and of superior quality, abounds in many the counties. It is worked in a few localities on the Baltimore and Ohio ilroad, but development of the iron of the State can scarcely be said to ave commenced. Other minerals are reported in every section of the State. me of the best timber of the country is to be found here, of all the different nds of oaks, black walnut, hickory, poplar, cherry, &c. A considerable trade timber is already in progress in the river counties, and boat building is engaged to some extent. The soil is generally productive, yielding well all farm roducts.

4. Few specialties in agricultural production are noted; the cereals are everyhere cultivated upon farms, and do well. The soil is generally well suited to heat and corn; the irregularity of surface is the principal drawback to tillage. orty bushels of wheat to the acre, with good culture, have been obtained in Webster. In the interior counties the principal market products are wool, sheep nd cattle. In Hancock, Brooke and Ohio, where nearly as many sheep as ultivated acres are found, hay is worth $16 to $20 per ton, and is a principal rop, yielding, in many cases, three tons per acre. Fruit is a specialty on the hio river, to some extent; and tobacco is made a prominent crop on some arms. The following statistics of Ohio county will give an excellent idea of he capabilities of West Virginia soils, and of the ameliorating effect of sheep usbandry:

Ohio county has 37,487 acres of improved land; on this there are 40,050 sheep, 3,244 hogs, ,441 horses, 1,408 cows, 246 oxen, 1,380 other cattle. The production was 20,048 bushels f wheat, 5,639 of rye, 138,430 of corn, 82,101 of oats, 22,072 of barley, 4,372 of buckwheat, 1,449 of Irish potatoes, 823 of sweet potatoes, 128,448 pounds of butter, 102,032 pounds f wool, 6,479 tons of hay, besides $54,420 of other products, excluding grapes and wines, hich may perhaps reach $100,000 more. On 110,490 acres of land in Ohio, Brooke and Hancock, there are 102,072 sheep, nearly a sheep to each acre.

5. A great diversity of views prevails relative to varieties of wheat. Preference is given for Mediterranean in Tyler, Lewis, Mineral, Hancock, Webster, nd Wyoming, on account of hardiness; for the Tappahannock in Kanawha nd Marion; for the blue stem in Barbour, Nicholas, and Randolph; for the Lancaster in Jefferson: for the May in Wood.

The period of sowing is generally included in the latter half of September. n Mineral and Randolph, northern mountain counties, September 1st is the beginning of the planting season, and in the central and southern counties the season is often prolonged to October 15, and sometimes to the 20th. The harvesting is commenced in the Kanawha valley June 20; in the central and northern counties from June 25 to July 1. In most of the counties the drill is not used at all; in Tyler, Grant, Cabell, Ohio, Brooke, and others, a small percentage is drilled; probably the State would not average more than five per cent. of he acreage drilled. An increase of yield is reported in cases in which the drill s used. A common mode of culture is to plough fallow or corn stubble, sow on the furrows and harrow in. In some cases wheat is put in with the double shovel plough. In Tyler county, of 700 acres in wheat, 430 are ploughed, and, when sown, harrowed in; 180 after sowing are shovelled in, and 90 acres are drilled in.

6. The pasture grasses of West Virginia are blue grass, red-top, white clover, and crab grass. The length of the season for exclusive feeding in pastures is seven months; in a few mountain counties it is returned as six months; in a few others eight or nine months; at the same time it is true that cattle are win-

tered in pastures or forests with very little extra feed, and sheep often wit none at all. On the 1st of April sheep may be seen in excellent condition which have received little if any attention or fodder during the winter. Th price of pasturage varies; increasing in accessible and improving localities. I Mineral the price reported for the season, which is comparatively short, is $2 50 in Grant, $4; in Barbour, Kanawha, Cabell, and other southern counties, $5 in Tyler, $7; in Jefferson, $8; in Mason and Brooke on the Ohio, $10; i Ohio county, $14 for cattle, and $17 for horses. The average will not excee a dollar per month for the State.

7. Nearly all kinds of fruit do well. It is essentially a fruit-growing State Apple-growing for the New Orleans market has long been a specialty of th river counties. Vineyards in the vicinity of the Ohio have proved exceedingly productive, and far more reliable than in the vicinity of Cincinnati. On th Kanawha, the soil, elevation, and climate, seem peculiarly adapted to grape growing, and the hills of the southern part of the State are already sought fo vine culture by Europeans who contemplate colonizing this region with vine dressers from Europe. In the interior, in absence of transportation facilities much fruit is dried for the market. In Braxton, the central county, the price obtained for dried peaches is $2 per bushel—if pared, $3; apples, 75 cents—i pared, $1 per bushel. Apples and pears are claimed to be best adapted to the soil and climate of Hancock county, the crops yielding a greater revenue than anything else raised from the ground. The Kanawha correspondent says:

> A neighbor told me yesterday he had an apple tree which frequently produced 40 bushels, but only every second year. Peaches will yield from four to eight bushels, but cannot be relied upon every year, as much as one year in three will miss.

The bell-flower, golden russet, Milam, and Rambo apples are general favorites, well suited to the river region, very productive and reliable. Peaches in Mineral county are reported at 50 cents per bushel. Of all fruits in Wood county, apples are the most certain and most profitable, and approach nearer to a staple; a good orchard of five or six acres sometimes yielding as much money as the remainder of a good farm. In Tyler 250 apple trees averaged $4\frac{3}{4}$ barrels, or 1,200 barrels worth $2,500. In Jefferson an average of 200 gallons of wine can be made from an acre of grapes, with moderate cultivation, and with a profit of 90 cents per gallon, equal to $180 per acre. There are some drawbacks, of course, as elsewhere. Early frosts occasionally change prospects of peaches and other fruits. It is noticeable that no correspondent complains of depredations of insects, with the single exception of the curculio upon plums in Harrison. Apples in this county will average a net profit of $600 per acre.

NUMBER AND PRICES OF FARM STOCK.

AMOUNT, IN TENTHS, AND PRICES OF FARM STOCK IN JANUARY, 1868.

Table showing the amount, in tenths, of the farm stock of the States named, in January, 1868, compared with the amount in January, 1867, and the prices of the same in January, 1868, for the different ages.

STATES.	HORSES.					MULES.				
	Average number of horses compared with that of February, 1867.	Average price per head of same under 1 year old.	Average price per head of same between 1 and 2 years old.	Average price per head of same between 2 and 3 years old.	Average price per head of same over 3 years old.	Average number of mules compared with that of February, 1867.	Average price per head of same under 1 year old.	Average price per head of same between 1 and 2 years old.	Average price per head of same between 2 and 3 years old.	Average price per head of same over 3 years old.
Maine	10.3	$38 91	$62 75	$86 95	$123 50	.....	.....	.....	.....	.....
New Hampshire	10.1	33 75	58 00	81 25	108 75	.....	.....	.....	.....	.....
Vermont	10.1	35 33	57 66	81 66	105 77	.....	.....	.....	.....	.....
Massachusetts	10.1	33 12	57 50	87 87	139 80	.....	.....	.....	.....	.....
Rhode Island	10	36 66	60 00	86 66	116 66	.....	.....	.....	.....	.....
Connecticut	10	32 25	54 75	86 25	113 70	.....	.....	.....	.....	.....
New York	10.2	41 36	64 92	97 72	133 33	10.1	$42 07	$63 57	$93 77	133 50
New Jersey	10.2	54 10	83 76	120 34	155 15	10.3	50 37	89 00	139 64	168 41
Pennsylvania	10	42 69	72 52	105 41	137 00	10.2	49 80	81 36	121 73	150 70
Delaware	10.3	41 66	63 33	96 66	136 66	10.7	40 00	70 33	101 66	150 00
Maryland	10.1	45 50	69 50	101 70	128 70	10.2	50 62	78 75	112 22	144 00
Virginia	10.3	34 11	53 63	81 85	113 50	9.9	41 33	65 44	104 78	131 97
North Carolina	9.9	32 02	51 35	76 12	100 57	10.1	36 37	59 74	89 86	116 25
South Carolina	9	31 44	52 11	79 44	109 00	9.4	35 55	59 56	97 44	122 00
Georgia	10.2	32 67	51 42	75 00	103 73	10.3	36 79	58 43	95 71	120 48
Florida	9.8	36 66	60 00	93 33	133 33	10	53 75	80 00	125 00	148 33
Alabama	10	30 92	52 42	75 00	110 18	9.7	41 16	60 41	90 66	120 00
Mississippi	9.7	25 12	47 75	60 15	98 33	9.7	35 91	52 08	78 76	99 62
Louisiana	9	20 50	29 50	49 00	85 33	9	50 00	60 00	82 50	100 00
Texas	10.4	12 09	20 53	30 48	44 98	10.2	20 11	29 96	44 28	59 31
Arkansas	11.7	27 58	41 00	60 92	80 76	11.4	30 45	47 90	63 27	87 07
Tennessee	10.8	38 33	59 27	78 54	103 20	10.1	40 75	65 33	94 56	116 45
West Virginia	10.9	35 53	56 81	77 33	101 67	10.1	37 50	58 33	83 33	112 14
Kentucky	9.6	33 67	50 14	70 38	92 05	10.5	39 77	60 34	84 83	107 89
Missouri	11.8	30 70	44 48	65 47	89 63	11.5	40 86	59 59	80 65	105 05
Illinois	10.7	33 80	53 83	75 60	105 12	10.8	42 59	64 57	91 56	120 81
Indiana	10.5	31 75	49 24	70 53	96 60	10.6	37 48	59 13	82 06	107 92
Ohio	10.5	35 06	55 48	78 99	107 14	10.2	40 18	64 31	91 35	119 23
Michigan	10.7	33 95	57 75	85 67	126 56	11.5	41 12	63 60	94 57	135 10
Wisconsin	11.3	41 36	65 15	98 17	143 79	10.8	43 78	71 15	111 00	155 00
Minnesota	12.3	43 55	68 44	98 61	126 53	10.4	46 22	71 89	110 10	141 91
Iowa	11	38 12	60 74	85 35	113 37	11.2	48 37	69 32	102 03	137 41
Kansas	11	31 17	47 33	65 92	91 92	9.1	39 42	60 42	84 58	115 42
Nebraska	11.8	33 25	62 70	90 00	120 45	9.3	36 62	73 00	104 71	144 33

Table showing the amount, in tenths, and prices of farm stock, &c.—Continued

STATES.	OXEN AND OTHER CATTLE.					MILCH COWS.	
	Average number of oxen and other cattle compared with that of February 1, 1867.	Average price per head of same under 1 year old.	Average price per head of same between 1 and 2 years old.	Average price per head of same between 2 and 3 years old.	Average price per head of same over 3 years old.	Average number of milch cows compared with that of February 1, 1867.	Average price per head of cows at this time.
Maine	10.3	$15 75	$28 29	$46 33	$80 70	10	$47 91
New Hampshire	10.1	13 50	25 00	41 50	76 25	10.1	47 25
Vermont	9.9	13 16	27 00	44 37	73 77	10.2	48 33
Massachusetts	9.9	17 83	30 16	48 50	88 11	10.8	67 11
Rhode Island	9.7	17 00	28 00	43 33	80 00	10	58 33
Connecticut	10.2	17 75	29 50	48 00	68 75	10.6	62 50
New York	10.1	14 09	26 53	47 01	71 54	10.6	52 54
New Jersey	10.1	15 97	27 88	44 61	71 00	10.4	57 22
Pennsylvania	10.2	12 68	23 30	37 94	55 67	10.1	44 94
Delaware	10.7	11 66	20 33	32 66	48 00	10.5	48 66
Maryland	10	11 00	17 70	29 20	43 30	10.1	39 90
Virginia	9.8	7 52	13 34	21 97	32 64	10.3	28 11
North Carolina	9.8	3 63	6 75	10 97	15 97	10	19 02
South Carolina	9.1	3 58	5 94	11 30	17 66	9.3	18 66
Georgia	9.9	4 65	7 86	12 00	18 60	10.3	21 06
Florida	10	3 30	5 80	9 66	13 08	10.1	11 91
Alabama	9.5	3 63	7 73	11 15	17 15	9.7	19 50
Mississippi	9.1	5 26	7 46	11 93	17 06	9.8	19 53
Louisiana	8.3	4 33	6 33	10 00	14 00	7	16 00
Texas	9.8	2 43	3 69	5 88	8 56	9.9	10 29
Arkansas	10.4	4 05	7 18	11 48	16 97	10.8	20 76
Tennessee	10.5	4 58	8 08	13 47	21 06	10.4	25 08
West Virginia	10.9	11 23	19 73	30 93	40 90	10.8	34 87
Kentucky	8.9	10 25	18 38	28 90	37 93	9.5	35 25
Missouri	10.8	7 16	12 97	21 43	34 15	10.9	29 04
Illinois	9.9	9 75	17 59	28 27	42 07	10.2	36 62
Indiana	9.9	8 95	17 30	28 68	42 06	10	36 31
Ohio	9	11 45	21 01	34 38	51 50	10.3	43 07
Michigan	10.8	10 92	20 30	30 38	54 17	10.8	42 30
Wisconsin	10.4	8 98	16 80	29 56	53 91	11	35 82
Minnesota	11.4	8 94	16 77	29 94	51 50	13.2	32 82
Iowa	10.7	8 67	15 28	25 21	42 41	10.8	31 10
Kansas	10.5	9 08	15 08	25 50	37 08	10.9	29 88
Nebraska	12.3	9 60	18 20	31 75	46 25	13.2	35 18

Table showing the amount, in tenths, and prices of farm stock, &c.—Continued.

STATES.	SHEEP.			HOGS.		
	Average number of sheep compared with that of February, 1867.	Average price per head of same under 1 year old.	Average price per head of same over 1 year old.	Average number of hogs compared with that of February, 1867.	Average price of same per head under 1 year old.	Average price of same per head over 1 year old.
Maine	8.4	$2 20	$2 95	9	$8 74	$18 95
New Hampshire	8.5	2 12	2 70	8.7	9 66	20 00
Vermont	7.8	2 18	3 00	8.6	9 43	17 91
Massachusetts	8.8	2 18	3 87	9.7	9 58	22 70
Rhode Island	9.9	2 66	3 90	9	11 00	20 00
Connecticut	9.2	3 00	4 37	9.4	10 00	20 00
New York	9.3	2 50	3 48	9.9	6 91	14 75
New Jersey	10.2	3 08	4 35	10	8 31	16 73
Pennsylvania	9.9	2 29	3 29	10.3	6 29	12 76
Delaware	9.7	2 50	3 66	11	7 00	12 00
Maryland	9.9	3 02	4 22	9.5	4 88	10 22
Virginia	9.4	1 93	2 67	9.2	3 66	7 68
North Carolina	9.6	1 15	1 83	8.4	2 59	6 05
South Carolina	8.3	1 34	2 05	6.7	3 22	7 52
Georgia	9.1	1 24	1 87	8.8	3 45	7 75
Florida	8.3	1 55	2 25	9.6	3 16	7 41
Alabama	9.3	1 11	1 98	8	2 43	7 86
Mississippi	7.6	1 02	1 69	7.5	2 88	6 93
Louisiana	6.7	87	1 41	7.5	2 25	3 75
Texas	8.8	1 23	2 08	8.4	1 61	3 65
Arkansas	10.3	1 82	2 98	12.3	2 52	7 18
Tennessee	10.1	1 38	2 01	11.2	2 83	6 71
West Virginia	10.9	1 56	2 55	11.4	2 00	4 87
Kentucky	9.6	1 85	2 70	9.2	2 80	6 31
Missouri	12.7	1 53	2 35	13	2 35	5 79
Illinois	9.3	1 64	2 39	9.6	3 22	7 33
Indiana	9.2	1 41	2 04	10.1	3 28	6 84
Ohio	9.0	1 81	2 65	9.7	4 11	8 93
Michigan	9.3	1 81	2 70	10.1	4 27	9 22
Wisconsin	10.3	1 92	2 86	9.8	3 90	8 59
Minnesota	9.9	2 03	2 89	11	4 73	10 08
Iowa	10.8	1 58	2 29	10.5	3 29	8 21
Kansas	9.4	1 50	2 32	11	4 70	10 21
Nebraska	10.6	2 27	3 45	11.4	4 50	12 10

UNIVERSAL EXPOSITION OF AGRICULTURAL IMPLEMENTS.

Under the auspices of the Belgian government, the Agricultural Society of Brabant proposes to hold a universal exhibition of agricultural implements and domestic animals, at Brussels, commencing June 20, 1868. Prizes and awards for competition, which is free to exhibitors of all nations. The society guarantees the cost of transportation on all Belgian railways of all contributions from foreign countries. Exhibitors are requested to make application in April, to the secretary of the society, at No. 36 Rue Verte, Brussels. Implements should be directed: The *Commission Directrice de l'Exposition d'Agriculture, Champs des Manœvres, at Brussels.* They will be received from June 12 to 16. For further information address the secretary of the society.

THE COTTON SUPPLY.

The extraordinary efforts made in Europe to make good the United States deficiency by stimulating production in Egypt, Brazil, China and India, were to such an extent successful that the south seemed likely to be ruled out of the list of cotton-yielding localities. This result, as soon appeared, was due to abnormal conditions, which began to pass away with the war which gave rise to them. With the stimulus of from 40 to 50 cents per pound in 1865, unusual activity in the southern States was directed to cotton culture in 1866, notwithstanding loss of slave labor, poverty of planters, neglected state of farms, and a general feeling of discouragement. The result was 1,900,000 bales. In the spring of 1867, with a reduction in price amounting to about fifty per cent., it was still determined to persevere, and farms being in better condition, and accessions of capital from the north having been enjoyed, the acreage of 1867 was somewhat larger, and the season being better, a still better result was attained, which bids fair to exceed the estimate of this department, and reach beyond 2,500,000 bales, more than half the result of the best cotton crop ever known. With a continuous fall in price, and the 2½ cents tax, it entailed positive loss in most cases, and left a cloud of gloom upon the whole cotton section. Under these circumstances the feeling has been prevalent, and almost universal, that cotton planting in the United States must for a time be abandoned as a general crop. This view was too hastily adopted, with little consideration of the facts in the case. Already receding prices were telling upon the supply from India and other foreign sources, while the products of American cotton was rapidly increasing. In 1866, to be sure, the British imports of India cotton exceeded her importation from this country, but now, for the first time since the beginning of the war, supremacy is again attained, if not the same measure of superiority, the old place at least, as the greatest cotton-exporting country in the world. The official account of British imports for 1867 shows this, and it is a fact of which this country should be proud, but still more proud if an equal quantity could be manufactured here. The following figures will show how the tables have been turned upon India in a single year, and how Great Britain has increased

er American purchases, while those of India, China, Turkey, Mexico, and her countries have been diminished, with a diminution of the total importation:

Cotton, raw, from—	1866.	1867.
	Cwts.	*Cwts.*
nited States	4,643,370	4,715,733
ahamas and Bermuda	7,515	10,623
exico	3,145	22
razil	611,808	628,761
urkey	92,996	57,024
gypt	1,055,900	1,127,541
ritish India	5,493,770	4,449,259
hina	52,120	4,707
ther countries	335,249	278,981
Total	12,295,803	11,272,651

For the purpose of comparison, the following statement in pounds of British mports for 1850, 1860, and 1867, respectively, is appended:

	1850.	1860.	1867.
Jnited States	493,153,112	1,115,890,608	528,162,096
Brazil	30,299,982	17,286,864	70,421,232
Mediterranean	18,931,414	44,036,608	----------
Turkey	----------	----------	6,386,688
Egypt	----------	----------	126,284,592
British East Indies	118,872,742	204,141,168	498,317,008
British West Indies	228,912	1,050,784	----------
Bahamas and Bermuda	----------	----------	1,189,776
Other countries	2,090,698	8,532,720	31,775,520
Total	663,576,861	1,390,938,752	1,262,536,912

Not only has this country regained its superiority in quantity, but in price the advantage is still more marked. In Liverpool, February 27, New Orleans middling commanded $9\frac{9}{16}d.$; fair, $10\frac{1}{2}d.$; Surat middling, fair, $7\frac{5}{8}d.$; fair to good fair, $8\frac{1}{8}$ to $8\frac{3}{8}d.$; Madras middling, fair, $7\frac{1}{4}d.$; good fair, $7\frac{1}{2}$ to $8d.$ This shows a difference of from four to five cents per pound, or about twenty-five per cent., between the gross returns of Indian and American cottons. With this advantage, exemption from tax, and a self-sustaining system of agriculture in the south, in which cotton shall play only an incidental part, there is no reason why we cannot grow again five millions of bales, *and manufacture it all*, at no very distant day, for the supply of the markets of the world.

The stock on hand of India, China, and Japan cotton, February 27, 1868, was as follows:

Year.	Surat.	Madras.	Bengal.	China.	Total.
1868 ..... bales	3,808	48,602	18,456	52	76,974
1867 ..... do	2,366	32,499	14,677	1,256	53,138
1866 ..... do	4,313	52,940	1,864	271	60,548

The quantity afloat at the same date was only 125,422 bales, against 179,135 at the same date last year, a decrease of 53,713 bales, or thirty per cent. This

is a favorable indication of an upward tendency in prices, and a sufficient reaso for an increase in prices of our cotton during the last sixty days, which wi doubtless add $20,000,000 to the gross proceeds of the present crop.

The bottom of the market has been reached. Those who feared it would fa out entirely are reassured; the future of cotton looks more encouraging, an there is a strong probability of a fair crop in 1868.

It is gratifying to note, while the cotton supply of Great Britain was decrease 1,023,252 hundred weight, or more than eight per cent, the demand for manu factured goods was increased, as shown by exports, as follows: Yarns, pounds from 138,804,538 in 1866, to 169,356,528 in 1867; thread, pounds, fro 6,355,458 in 1866, to 6,506,851 in 1867; yards of cotton goods, fro 2,575,698,138 in 1866, to 2,830,417,875 in 1867, valued respectively a £57,903,200 and £53,132,831.

The amount paid in 1866 for imports of raw cotton was £70,665,438; i 1867, £48,338,241; a decrease of £22,327,197, or $111,000,000; the price pe pound averaging within a fraction of twenty-eight cents in 1866, and but sev enteen and a half cents in 1867. The total value of exports of cotton goods yarns and threads, in 1867, was $359,000,000.

AGRICULTURE IN SOUTH JERSEY.

The following extracts from a letter of Edward Vanmeter, of Salem, Nev Jersey, to the Commissioner of Agriculture, relate to the agricultural prosperity of that county:

We have over 1,450 farms in our county, which will average probably one hundred acre each. Timber is becoming scarce with us. There are many thousand acres of brush o bush timber land along the southeasterly line of our county, known now as the third fourth and fifth growths, which will furnish fuel for a long time to come, as they will bea cutting every twenty-five years. It is interspersed with chestnut, which is better than ceda for rails, and marl of a superior quality has been discovered in different localities, so tha the soil, though apparently valueless for farming operations, except in a few favored spots is really valuable property. Saw-timber for lumber and building purposes will soon b among the things of the past with us. The most of our farms along the Delaware river an the inland creeks have meadow. Some of this meadow is classed as number one for grazing purposes. That portion called inferior is noted for producing herdsgrass. The cattle wil not eat the hay; it is thrown, after threshing, into the barn yard for manure, but the seed i always in great demand, varying in price from fifteen cents per bushel in former years, t one dollar and a half at the present time The returns of some of our farmers the pas season for herds seed have been unexpectedly large, some farms yielding from $1,000 t $3,000, according to the number of acres in meadow.

Our people everywhere seem encouraged, and we are this day, in the county of Salem, certainly, in one sense of the word, "a landed aristocracy;" and wherever there is a farme who is industrious and attentive to his business, he is on the sure road to prosperity an wealth.

Land is steadily advancing in price. A farm near this city, that was sold nineteen years ago for one hundred dollars per acre, known as the "Tyler" grazing farm, contained one hundred and eighty three acres upland and meadow, and was called a dear farm. The late owner died recently and the farm was sold for two hundred and forty-seven dollars pe acre, cash.

A good farm horse is worth two hundred dollars; a road nag from two hundred and fifty to five hundred dollars. A milch cow that will make six to eight pounds of butter pe week is worth from one hundred to one hundred and twenty-five dollars. We have cows of the native stock that will make ten pounds of butter per week. I own two that will do it. A bull four years old, of good stock, Durham, Devon, or Grade, is worth from seventy-five to one hundred dollars. A Thorndale bull sold this winter at public sale, about five miles from this city, for four hundred and sixty dollars: he is said to be a very superior animal.

PORK PACKING.

The following quotations relative to pork packing in Cincinnati are from the Cincinnati Price Current:

The whole number reported by the packers is 366,481 head, which does not include those packed in October. The following shows the whole number of hogs packed in this city for nine years:

Years.	No.	Years.	No.
1860	434,499	1865	350,600
1861	433,799	1866	354,079
1862	474,467	1867	462,600
1863	608,457	1868	366,481
1864	370,623		

The following were the average weight and yield of leaf lard per hog for the past nine seasons:

Year.	Average weight.	Yield of lard.	Year.	Average weight.	Yield of lard.
	Lbs.	*Lbs.*		*Lbs.*	*Lbs.*
1859–'60	189	23	1864–'65	201 1/8	24 1/5
1860–'61	221 5/5	28 9/16	1865–'66	238 18/31	32 12/26
1861–'62	224 3/4	29 5/18	1866–'67	232 2/7	30 1/12
1862–'63	203	25 21/23	1867–'68	210 3/17	25 5/28
1863–'64	88 11/12	23 1/8			

The following shows the average price of hogs per cental, net, the last fifteen seasons:

1853–'54	$4 44 1/4	1861–'62	$3 28 5/5
1854–'55	5 00 3/4	1862–'63	4 45
1855–'56	6 04 3/4	1863–'64	7 00 1/2
1856–'57	6 23 3/4	1864–'65	14 62 1/8
1857–'58	5 16 1/2	1865–'66	11 90 5/8
1858–'59	6 58 1/8	1866–'67	7 52 1/2
1859–'60	6 21 1/8	1867–'68	8 25 1/4
1860–'61	5 97		

The following statement relative to pork packing at Chicago is from Messrs. Millwood & Co.'s circular of February 22:

We have received the returns from some twenty-three packers, comprising the largest and about the smallest in the city. Their packing sums up about 450,000 head; their average net weight, 190 1/4 pounds; and their average yield of lard, 27.36 pounds per head. We have yet some twenty packers to hear from, and we calculate their returns will increase the total packing to nearly, if not quite, 800,000 head, but there is little chance of any change in the average weight of the hogs or the yield of lard per head. Last year the average weight was 227 3/8 and the average yield of lard 38 pounds per head. Calculating our present year's packing at 800,000 head, against 635,732 last year, we should have some 7,500,000 pounds more weight than we had then, but the yield of lard would be some 6,750 tierces less than was made last season. The packing to the present time sums up 772,727, against 633,000 in 1867 and 463,450 in 1866. Several of the dressed-hog packers are still at work. Some are purchasing 200 to 500 daily, and their operations retard the summing up of the season's packing.

The following is the recapitulation of the number packed in the northwest i two seasons:

	1866–'67.	1867–'68.
Ohio	637,382	557,80
Illinois	851,945	1,072,5
Indiana	329,291	323,97
Iowa	115,441	177,04
Wisconsin	135,060	163,4
Missouri	233,230	328,61
Kentucky	188,442	157,88
Grand totals	2,490,791	2,781,37
		2,490,79
Increase in number		280,57

The average weight of hogs and the yield of leaf lard per hog for each Stat compare with last season as follows:

	Average weight per hog.		Yield of lard per hog	
	1867.	1868.	1867.	1868.
	Lbs.	*Lbs.*	*Lbs.*	*Lbs.*
Ohio	234½	204½	31⅛	24
Indiana	232⅔	205⅝	31⅜	22
Illinois	231⅜	202⅜	28	22
Kentucky	228	206⅚	27	22
Missouri	226½	208⅞	31½	21
Iowa	231⅙	199¼	29⅐	21
Wisconsin	218⅖	197	31½	21

The general averages for all are—of hogs, 201 pounds; and of leaf lard, 20 pounds; which compare with the last two seasons as follows:

	Hogs.	Lard.
	Lbs.	*Lbs.*
1866	231 3/10	31
1867	232⅐	29
1868	201	20

Pork, pounds, last year	577,863,51
Pork, pounds, this year	558,955,47
Decrease in pounds this year	18,908,04

This is equal to a net decrease in the crop of 3½ per cent., and makes th crop, as regards the packing in the west, equal to 2,408,741 hogs of last season' average, not including the falling off in the shipments to the east during th packing season, which would further materially reduce the crop.

BUSINESS AND RESOURCES OF DENVER.

The influx of population and development of mining and other enterprises in ne Rocky Mountain section is stimulating agriculture in the west to a wonderful degree. A communication from the Board of Trade of Denver, Colorado, ontains the following statement of the business of that place for the year ending October 31, 1867, and is mainly derived from official figures in the assessor's ffice :

ross sales of merchandise	$5,946,000 00
ash paid for freight	2,171,000 00
ounds of freight received	17,122,000
ounds of corn and wheat sold	12,638,000
acks of flour sold	70,386
ash value of lumber sold	$850,000 00
50 buildings erected, valued at	722,650 00
ash value of goods manufactured in Denver	887,000 00
ash receipts for passengers by stage lines	591,801 00
ash receipts for express matter	168,976 00
Gold shipped by Wells, Fargo & Co	1,560,000 00
Gold bought by banks	604,000 00
old and silver received by United States branch mint	289,158 70
verage cash deposits in banks	741,000 00
verage loans and discounts by banks	398,000 00
astern exchange sold by banks	8,301,000 00
mount of cash paid over bank counters	77,870,000 00

The city engineer estimates the water-power of South Platte river, between wo points named in Denver, in a total fall of 113 feet, as equivalent to 6,312 orse-power.

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*This amount does not represent the yield of gold for the Territory, as over one-half the old passes to the east in the hands of private parties.

†The principal yield of gold is from the counties of Gilpin, Clear Creek and Summit, and nearly all the gold from those counties is purchased at Central City.

Population, area, abstract of acreage under crops, &c., and number of live stock in each division of the United Kingdom.

Population, &c.	Years.	Eugland.	Wales.	Scotland.	Total for Gt. Britain.	*Ireland.	Isle of Man.	Channel islands.		Total for United Kingdom.
								Jersey.	Guernsey, &c.	
Total population	1866	20,276,494	1,187,103	3,136,057	24,599,654	5,571,971	52,469	55,613	35,365	30,315,072
Total area, (in statute acres)	1866	32,590,397	4,734,486	19,639,377	56,964,260	20,322,641	180,000	28,717	17,967	77,513,585
ABSTRACT OF ACREAGE.										
Under all kinds of crops:										
Bare fallow and grass	1866	22,236,737	2,284,674	4,158,360	28,679,771	§15,550,231	82,902	20,357	11,999	44,345,260
	1867	22,932,356	2,519,170	4,379,552	29,831,078	§15,542,208	84,498	20,355	12,958	45,491,097
Under corn crops	1866	7,365,170	521,074	1,366,540	9,252,784	2,174,033	27,266	3,142	2,041	11,459,266
	1867	7,389,347	521,404	1,364,029	9,284,780	2,115,137	27,039	2,827	2,157	11,431,940
Under green crops	1866	2,759,912	139,265	663,257	3,562,434	1,481,605	12,208	5,253	2,938	5,064,438
	1867	2,691,734	138,387	668,042	3,498,163	1,432,252	12,670	5,636	3,075	4,951,796
Under bare fallow	1866	760,979	109,878	94,080	964,937	25,419	8,357	2,552	372	1,001,637
	1867	753,210	86,257	83,091	922,558	26,191	1,990	2,550	709	953,998
Under grass, clover, &c., under rotation	1866	2,296,087	256,722	1,141,415	3,694,224	1,601,423	25,309	3,205	886	5,325,047
	1867	2,478,117	300,756	1,211,101	3,989,974	1,658,451	26,884	3,250	874	5,679,433
† Permanent pasture not broken up in rotation	1866	8,998,027	1,257,721	893,066	11,148,814	10,004,244	9,762	6,205	5,762	21,174,787
	1867	9,545,675	1,472,359	1,053,285	12,071,319	10,057,072	15,915	6,092	6,143	22,156,541
‡PERCENTAGE OF ACREAGE.										
Under corn crops	1866	33.1	22.8	32.9	32.3	14.0	32.9	15.4	17.0	25.8
	1867	32.3	20.7	31.1	31.1	13.6	32.0	13.9	16.7	25.1
Under green crops	1866	12.4	6.1	15.9	12.4	9.5	14.7	25.8	24.5	11.4
	1867	11.7	5.5	15.3	11.7	9.2	15.0	27.6	23.7	10.9
Under bare fallow	1866	3.4	4.8	2.3	3.3	.2	10.1	12.5	3.1	2.3
	1867	3.3	3.4	1.9	3.1	.2	2.4	12.5	5.5	2.1
Under grass, clover, &c., under rotation	1866	10.3	11.2	27.4	12.9	10.3	30.5	15.8	7.4	12.0
	1867	10.8	11.9	27.7	13.4	10.7	31.8	16.0	6.7	12.4
† Permanent pasture not broken up in rotation	1866	40.5	55.1	21.5	38.9	64.3	11.8	30.4	48.0	47.7
	1867	41.6	58.5	24.0	40.5	64.7	18.8	30.0	47.4	48.7
Total	.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
ABSTRACT OF LIVE STOCK RETURNED.										
Total number of cattle	1866	3,307,034	541,401	937,401	4,785,836	3,746,157	18,687	12,037	6,976	8,569,693
	1867	3,469,026	544,538	979,470	4,993,034	3,702,378	18,672	10,081	7,308	8,731,473
Total number of sheep	1866	15,124,541	1,668,663	5,255,077	22,048,281	4,274,282	55,954	517	1,214	26,380,248
	1867	19,798,337	2,227,161	6,893,603	28,919,101	4,826,015	70,958	529	1,348	33,817,951
Total number of pigs	1866	2,066,299	191,604	219,716	2,477,619	1,497,274	10,956	6,332	5,599	3,997,780
	1867	2,548,755	229,917	188,307	2,966,979	1,233,893	7,706	5,804	6,718	4,221,100

PROPORTIONATE NUMBER OF LIVE STOCK TO EVERY 100 ACRES UNDER CROPS, FALLOW, AND GRASS.

PROPORTIONATE NUMBER OF LIVE STOCK TO EVERY 100 ACRES UNDER CROPS, FALLOW, AND GRASS.										
Cattle	1866	14.9	23.7	22.5	16.7	24.1	22.5	59.1	58.1	19.3
	1867	15.1	21.6	22.4	16.7	23.8	22.1	49.5	56.4	19.2
Sheep	1866	68.0	73.0	126.4	76.9	27.5	67.5	2.5	10.1	59.5
	1867	86.3	88.4	157.4	96.9	31.1	84.0	2.6	10.4	74.3
Pigs	1866	9.3	8.4	5.3	8.6	9.6	13.2	31.1	46.7	9.0
	1867	11.1	9.1	4.3	9.9	7.9	9.1	28.5	51.8	9.3
NUMBER OF PERSONS FROM WHOM RETURNS WERE OBTAINED.										
Occupiers of land owning live stock, and occupiers of land only	1867	338,588	52,072	78,792	469,452	} Abont {	2,329	.....	.....	.....
Owners of live stock only	1867	7,457	572	4,629	12,658	} 600,000 {	100	.....	.....	.....

* For detailed returns for Ireland see Register General's Annual Reports, laid before Parliament.
† Exclusive of heath or mountain land.
‡ The percentage of acreage is exclusive of hops in Great Britain and flax in Ireland.
§ Including under flax 263,507 acres in 1866, and 253,105 acres in 1867.

CULTURE AND PRODUCTS OF THE VINE.

The following is a report, to the United States commission at the Universa Exposition of Paris, in 1867, of the committee "on the culture and products o the vine:"

The exhibition of wines at the Universal Exposition of 1867 was large Every wine-growing country of Europe, as well as Australia, Canada, California and other sections of North and South America, were represented. As there were no jurors from the United States, our American wines were not subjected to so full and fair an examination as they were entitled to, and to remedy this omission a special committee, consisting of the undersigned, was appointed by the Board of Commissioners to make an examination of the wines of our own and other countries, and to report especially with reference to wine growing in America. To properly judge, however, of the different kinds, of the qualities cost, sanitary influence, and adaptability to our country—points upon which we would have been glad to report more fully—would require more thorough tasting and more time than the committee could command, or had a right to demand from the courtesies of foreign exhibitors or commissioners.

As regards French wines, full reliance cannot be placed on what is furnished to the American traveller at hotels or cafés, or even what is sold him at the shops, no matter what price he pays. It would, however, be doing French wines a great injustice to judge them by the qualities sold in this way, or exported to America. The great body of American consumers have palates as yet so unskilled, and the merchants of Bordeaux, and fabricators and imitators are so adroit, that it seems impossible for the honest wine grower here to come into such relations with the wine drinkers there as shall secure to the latter the benefits, sanitary and moral, which the French people themselves derive from the pure juice of the grape so abundantly produced in this country. It is not an unusual practice for dealers to buy of producers in the back country a coarse, deep red wine for 30 cents per gallon, and a strong white wine for 45 cents per gallon, mix and bottle them, and send them abroad labelled with all the high-sounding names of "Medoc," to sell at enormous profits to unsuspecting foreigners.

Further south than Bordeaux, in the country about Montpelier and Bezircs, an inferior article, but perfectly pure, can be obtained of the producer at five and six cents per gallon, or one cent per bottle. Of late years, and since the abatement of the grape disease, the production of France has been very large, the 4,000,000 of acres in cultivation yielding an average of 1,200,000,000 of gallons, which would give to every man, woman, and child in the country, a half bottle-full every day, even after allowing 200,000,000 of gallons for exportation.

Owing, perhaps, to the intimate relations between America and Germany, our wine commerce with that country is conducted in a much more satisfactory manner. A good deal of excellent German white wine now makes its way to us, and is highly appreciated.

Hungary, whose product is second to that of France only, can supply a wide range of varieties, and at prices extremely reasonable. As the Hungarian producers seem to know, as yet, but little of chemistry, we suppose their wines to be generally pure, and as they are not yet fully introduced into the markets of the world, we should think they might be advantageously purchased to a greater extent than has yet been done.

Besides the sherry, of which we consume so largely, Spain has an abundant and rich vintage with which American consumers would be better acquainted if her merchants had more of the enterprise of those of Bordeaux.

Portugal also produces plenty of excellent and pure wines of which we know little, for hardly a drop is allowed to leave the country without being so strongly brandied as to lose its character as a wine, and become rather a spirituous liquor.

rt wine is repeatedly dosed with spirits until it contains at least as much as
per cent. of alcohol. Fifteen years' age is required before it is fit to drink,
t because the wine is slow to ripen, but because the spirit needs to remain
5 years before the disturbance it causes can subside, and the antagonistic
gredients of the mixture harmonize.

Notwithstanding bold and persistent assertions to the contrary, it has been
tisfactorily proven to your committee that the adulteration is made not to pre-
rve the wine, but solely to make it sweet and stimulating.

As America is destiued to become a great wine-producing country, her people
ght to be better acquainted than they are with the higher grades of foreign
ines, but they have as yet drunk so little of these, that their staudard of
celleuce remain comparatively low. Now, except in Califoruia, none of the
uropean vines will grow iu America, and we are compelled to search in our
rests, and develop in nurseries and vineyards the varieties which are iu the
ture to be our reliance for competing with foreign producers, and finally, it is
be hoped, emancipating ourselves from them altogether. Of course then the
igher our standard of taste is, that is, the higher our aim, the better will be
ur success. Our vine growers have much more to learn of the character and
uality of good wiues than they have of cultivation and manufacture, for really,
s to the preparation of the soil, planting, cultivating, pruning and training the
ines, gathering, selecting, and pressing the fruit, fermenting and keeping the
ine, (white wine, at least,) our experienced vignerous have but little to learn
f European rivals.

Our American vineyards compare very well with those of France, aud so do
ur cellars, presses, and casks, so that an elaborate report on methods would
e of but little benefit, and might even mislead, for there seems to be no one
ethod in use here, in any stage of vine-raising or wine-making, concerning
which there is not a confusion of practice and a conflict of theory, such as it
would be hopeless to attempt to reconcile. Probably sound reasous for much
f this diversity may be found in peculiarities of soil and varieties of vines that
re local and special, and with which we have nothing to do. Still, a pretty
horough tour among the vine districts of France has not been wholly barren
f suggestion.

SOIL AND EXPOSURE.

The soil of Medoc, where stand "Chateau Margeaux," "Chateau La Fitte,"
nd "Chateau La Tour," is a bed of coarse gravel, among whose pebbles the
ye can barely detect soil enough to support the lowest form of vegetable life.
In the vicinity of Bezires, on the other hand, the land is rich and strong
enough to yield any kind of a crop; yet Medoc grows wine that often sells for
en dollars per gallon, while that of Berzires sometimes sells for the half of ten
cents per gallon. In Burgundy there is a long hill, on whose dark red ferru-
ginous limestone sides a wretched thin covering of earth lies, like the coat of a
beggar, revealing, not hiding, the uakedness beneath. Here stand little starve-
ling vines, very sleuder aud very low; yet here is the celebrated "Clos Vaugeot,"
and this is the hill, and these are the vines that yield a wine rivalling in excel-
lence and value that of Medoc, and to the fortunate proprietor the *Coté d'or*
is what it signifies, "a hillside of gold." At its base spreads out a wide and
very fertile plain, covered with luxuriant viues, whose juice sells from ten to
twenty cents per gallon.

If you go further northward aud examine the hills of Champagne, you will
find them to be merely hills of chalk; and these instances only illustrate the rule
derived not from them alone, but abundance of others, that, for good wine, you
must go to a dry and meagre soil. Yet we should be sorry to have to extend
the rule, and say that the poorer the soil the better the wine, for there are cer

tainly very few patches of ground in America that can match in poverty the mountains of Champagne, the hills of Burgundy, or the slopes of Medoc; nor would it do to conclude that manure should not be applied, for although some say it is hurtful to the wine in its quality, it is yet an open question whether this is so or not. Meanwhile the practice is to manure, although sparingly.

PREPARING THE GROUND, PLANTING THE VINES.

This is probably as well understood in America as in France. We usually break up to the depth of two feet and drain thoroughly. In many parts of France they trench to the same depth, but in many other parts this is impracticable, unnecessary, or injurious. Here, the distance between the vines is from eighteen inches to two feet, according to their size. We, however, are compelled, by the greater vigor of our vines, to place them five and six feet apart.

In Burgundy, Champagne, and some other districts it is the practice to renew the vigor of the vines, by laying down the cane and rooting the plant in a new place, which quite breaks up the original lines, so the plough cannot be used. This is doubtless a good way to renew the strength of the plant, but it is objected to by high authority, on the assumption that the older the stalk is the better the wine will be; on the other hand, Champagne wine dressers have attributed to this practice in a great measure their almost total exemption from the vine disease.

But then again, others attribute that exemption to the general and long established custom of spreading over the vineyards a bituminous shale containing sulphur, a well-known antidote; and here we would recommend most strongly to our countrymen a renewed and sustained effort to combat mildew with sulphur. The experience of France and other countries is entirely in its favor, and its use is still felt to be necessary, and is still kept up.

We think Americans have not been thorough enough, and patient enough. Let them try again, and this time let them begin early, and to be sure to follow carefully these rules on the subject, which have been hitherto much better promulgated than observed. On rich and level land, a common plan in some districts is to set out double rows of vines at wide intervals, in fields chiefly devoted to other crops. The free exposure to sun and air thus secured seems largely to augment the yield. and this will be understood by any one who has noticed the superior productiveness of such of his vines as grow bordering on a wide alley or other open space. This is very different from planting vegetables, &c., among the vines, which is a bad practice.

WIRE TRELLIS.

These are becoming quite popular here, as we think they are in America also, notwithstanding the cheapness of wood. The size of wire preferred is number 16, and but two wires are used. Our large vines would need three wires. They are stretched to strong posts set 20 feet apart, passing intermediately through holes of smaller posts or stakes. On the lower line, about 18 inches from the ground, the fruit-bearing wood is trained, while the upper line, about 18 inches above the other, supports the new wood. Many prefer to allow the fruit-bearing cane to do service two years, instead of one only, as is the practice in America. There is no doubt that with wire trellises the pruning, tying, pinching off, &c., can be much more cheaply done than where the training is to stakes, and from the way the clusters depend from the horizontal cane, it is easy to see that there must be also a superior access of sun and air, and a greater ease in gathering the vintage.

It is a common practice to go through the vines with a plough every fall, and throw up a good ridge of earth against the stalks. The Hungarians have a more effectual way of guaranteeing against the cold of their vigorous winters,

hich is to lay the vines on the ground, cover them with straw, and on the raw throw the earth; without this it is said they could produce no wine at all. ur native grapes are generally hardy, and will live wherever their fruit will pen, but occasionally there is a severe season which seems to touch the very art of the wood, and so enfeeble it that it falls an easy prey to disease. It as noticed that the mildew set in with great destructiveness after the two hard inters of 1854 and 1856.

The thorough covering employed in Hungary would secure it against such ccasional risks, and also might render it possible to grow European vines in ur country. By its means, too, we could, perhaps, make the "Scupper" live n our northern States, and obtain from it a sparkling wine, of foam and flavor nsurpassed. From these considerations and others, we recommend to the wine-rowers of our more northern States to lay down and thoroughly cover their vines egularly every fall; and to those in milder regions, to bank up the earth against ne stalks as is done in France.

We have derived most of our instruction in vine-dressing from the Germans n whose native country there are no sunbeams to spare; and the celebrated Risling" grape is said to hardly ever ripen, and thus, perhaps, we have been led to ttach too much importance to letting the fruit remain on the vine as long as ossible before gathering. If we have been in error, it would be well worth while know it, for, besides the loss by shrinkage, the ravage of insects and birds, uadrupeds and bipeds, during the last fortnight of the vine-dressers' watchings' most disheartening. Now, it is contended by good authority in France that arly vintages are the best, and that it is important, not merely in regard to uantity but quality, also, to gather the fruit before it becomes over-ripe. Pos-ibly what is true of white wine may not be so of red wine, to which last named kind attention is so widely directed in Europe. Here the proportion of white vine to red is very small, and it may be said that red is the rule, and white the xception.

Our wine-growers in America understand very well the principles to be bserved in the manufacture of white wine, and many of them, as regards care nd nicety, are as good models as need be desired. But it cannot be denied hat the practice of selling the ripest and finest grapes for table use, and convert-ng the unsalable into wine, prevails to a great extent among American vineyardists, nd the result is the manufacture of much inferior wine. This has already njured the reputation of American wines, both at home and abroad. Of the much more complicated process of making red wine, however, American manu-facturers are but little informed, for the reason that until recently they have had o grapes suitable for the purpose; but now that we have discovered those xcellent varieties, the "Morton" and "Ives" seedlings, our estimate of the value of which has been very greatly raised by comparing wine from them with some of the highest grades of foreign productions, a few observations of methods of fermentation for red wine as practiced in France may be appropriate.

In France, they will make either white or red wine from the same grape; but n America they have grapes whose pulp is so rich in coloring matter that they yield a very pretty tinted wine without any further treatment than what is given to make white wine, and a pure white wine cannot be made from them; of this kind is the "Morton" seedling. Yet not for beauty alone do they put them through the process of fermentation on the skin, but because that process imparts qualities which, as affecting the palate, stimulation, digestion, &c., are quite different from what the other process imparts; many persons find red wine essential to their health, who cannot use white wine, and *vice versa*.

STEMMING.

The fruit having been gathered and selected, the next thing to do is to stem it. In "Medoc" and all the "Borderlais" this is invariably done. But in

"Burgundy" and other districts they commonly omit it, and throw stem and all into the vat; if, however, the season has been bad, and the stems remain unripe, they are of necessity excluded in whole or in part, lest they do more harm than good. The chief reason for putting in the stems is to correct the disease called "teitter," for which the turrin acid, &c., of the stem is thought to be an antidote. Fortunately we know comparatively little, as yet, of any wine disease, except acidity, but still it will remain for us to decide upon experience which of the two methods it is best to adopt. Probably we shall arrive at the same diversity of practice as is witnessed here. Stemming is usually done by rubbing the fruit upon a grating of iron rods, but the better way decidedly is a grating of wood. It is made of bars two-thirds of an inch square, carved into each other where they cross so as to bring them down to an even face, leaving openings or meshes two-thirds of an inch square. This is established like a table with four legs, with a rim around it about ten inches high, and a proper receptacle beneath to receive and carry off the stemmed fruit as it falls through and the juice which escapes. The table is four feet square and four feet high. About three bushels of grapes are put on to the grating, which four men with bare arms soon rub through, leaving the stems behind, which are then thrown into a small circular press like our hand cider presses, which extracts the juice of the few grains remaining on them. In this way four men can stem enough to make fifty barrels of wine per day. For one who makes but a small quantity, a deep tub and a three-pronged stick will do very well.

CRUSHING.

This is next to be done, by trampling the grape with the naked foot. It is said to be a better way than to use a large mill, for the reason the mill will crush the seed; but the seeds are not easily crushed, and a properly made grape mill need not bruise them in the least. At a well managed wine house, that of Messrs. Averons Brothers, in "Paulliac," they put the grapes to ferment with no further crushing than what is given them in the process of stemming, which experience has satisfied those gentlemen is all that is needed.

Treading out grapes with bare feet is well enough if the feet first be made clean, but probably no American will ever adopt the plan of crushing with naked feet, either clean or unclean, but will either rely on the crushing given in the stemming process, or use a mill, or a bucket and tripod.

FERMENTATION.

The crushed mass, with or without the stems, is next thrown into vats and allowed to ferment. The vats are large casks, generally without bulge, the largest at the bottom, and open at the top. In some of the large houses they are covered with loose boards; in others the boards are jointed and made hermetically close by plastering with cement or clay; in others there is merely a floating mass of stems; and in others there is no covering at all except the scum of stems, skins, seeds, &c., which rise to the surface.

After the fermentation has ceased and the wine becomes clear, it is drawn off and put away in close casks, which in France are almost uniformly of the size called "barrique," holding about fifty gallons. In Burgundy these are kept above ground and in the light until spring, and then put into cellars, while in the Bordeaux country they remain in the light in storehouses above ground until one or two years old, and then removed to dark rooms on the same level. A careful way of making red wine out of grapes not fully ripened is to allow it to remain in the vats for a sufficiently long time after fermentation to let the greenness held in suspense settle to the bottom.

At "La Tour," in the vintage of 1866, they allowed the wine to remain in the vat a whole month, though the fermentation was probably complete in half

the time. After drawing off the remaining undissolved pomace, it is pressed d made into a wine of inferior quality. It is common in France, and it would sometimes necessary in some parts of America to provide means of warming e wine-house up to at least 20 degrees of "Centigrade" or Fahrenheit, as ell as to introduce steam heat into the vats themselves, which is done by eans of a tin pipe, entering to the right of the faucet and a little above the ttom of the vat, bending to the bottom and rising again in the form of a letter , and then passing out at the other side of the faucet, at the same distance om it, the steam entering at one end and the condensed vapor escaping at the her; but heat is only applied in cold seasons and when the grapes are badly pened.

In France, the fruit of different varieties are commonly mixed together, and enerally but little account is taken of "cesaye" (variety) as compared with e quality of soil. Well-informed persons, however, are disposed to complain the introduction, which has been quite general of recent years, of coarse arieties grown for quantity rather than quality.

There is one variety of vine commonly seen on rich soil and deemed unfit r poor ground, except where grown for brandy, as in Cognac, that may pos- bly be of value to us. It is called "la folle," (the crazy;) "en ragatt, ' (from aged.) Except in its infancy it needs no stakes, but holds itself erect by e strength of its stalk, which is trained about one foot high, and from which e cane or branches shoot out with great vigor, like those of the osier willow runed low. Every winter all the branches are cut back to two or three eyes, nd during the season the ground is cultivated in the usual manner, but further an this it demands no attention. There is no summer pruning nor any tying, inter or summer It is never hurt by frost, is proof against all disease, and unfailing in its fruiting, and yields, when in good condition, 12 to 15 gallons f wine per acre. Its most favorable soil is a sandy loam, and when grown on uch its wine, which is quite strong, is worth 40 cents per gallon. Of that roduced about Bordeaux a good deal is mixed with coarse red wine and made nto claret for American consumption. Of itself it will not make red wine. It s possible that this hardy vine or grape will stand our severe winters, and, with r without winter covering, obtain a footing in American soil. If so, every armer or whoever else can command a quarter of an acre of land might raise or his own table an abundance of good sound wine at a trifling cost. Gener- lly it is a bad policy to introduce a coarse plant of any sort, but we have so vast a spread of land that is too rich for growing delicate wines, no matter what variety of plant is tried, and of late the mildew and rot have been so dis- couragingly fatal in many parts of our country, it might be well to give the "en agatt" a trial, and, since we must drink the juice baptized with the names of St. Julian," "Chatteur," "Margeaux," and all the saints of Medoc, we may as well enjoy the satisfaction and the very large profit of raising it ourselves.

Not only do the French mix different kinds of grapes in the vat and on the press, but they freely compound together different kinds of wine in every stage of maturity. This is done of course with great carefulness, and the success of the merchant in his business depending on his skill in concocting what will please the palate. Such combination may be agreeable to the taste of the consumer, and profitable to the merchant, but it may well be doubted if it is as good for the health as that which is simply natural, and made from one variety of grape.

A French wine-grower has introduced the Catawba into his vineyard, and uses its juice to mix in very small proportions with that of native grapes to give flavor. Any considerable addition of the Catawba's musky quality would be more than the French palate, trained to like only that which is negative, could very well bear.

When American wines were tested by the jury at the Exposition, the French

jurors, whose scale was from one to four, with a zero at the foot, generally complimented our Catawba with a zero, and they remarked that the more of the natural flavor the wine possessed, other things being equal, the lower they should estimate it. In America the very contrary is known to be the case. The German jurors, accustomed to wines of high bouquet, held quite different opinions from the French, and were much pleased with the American samples.

In regard to the more delicate wines of Europe which do not bear exportation, an important discovery is said to have been made by the distinguished chemist Pasteur, of the Institute, which is exciting great interest, and promises nothing less than to secure wine against disease and deterioration for an indefinite period, to enable it to be transported with safety any distance, and kept in any sort of storehouse. The best way to make known in America the discoveries of Mr. Pasteur would be to translate and publish his very valuable work, entitled "Etudes Sur le Vin," sold by Victor Masson & Sons, Place de l'Ecole de Medicine, Paris. Meanwhile we will give a brief synopsis of it.

After explaining at length the nature of the different diseases of the wine, acidity, bitterness, &c., tracing them all to vegetable parasites, and detailing his experiments in search of an agent to destroy the parasites, Mr. Pasteur arrives at the conclusion that they are effectually destroyed by heating the wine up to a point between fifty and sixty-five degrees of centigrade, which would be between 122° and 149° of Fahrenheit. The heating can be done in a "Bain Marie," that is, by placing the bottle or cask in a vessel filled with water and heating the water, or by hot-air closets or steam-pipes introduced into the casks. The heating should be gradually and carefully accomplished in order to enable any one to test the value of this invention, so important in its aims.

We extract the following, which gives all the author has to say on the mode he has himself followed with wine already in bottle, whether new or old, diseased or sound:

"The bottle being corked, either with the needle or otherwise, by machine or not, and the corks tied on like those of champagne bottles, they are placed in a vessel of water; to handle them easily, they are put into an iron bottle-basket. The water should rise as high as the ring about the mouth of the bottle. I have never yet completely submerged them, but do not think there would be any inconvenience in doing so, provided there should be no partial cooling during the heating up, which might cause the admission of a little water into the bottle. One of the bottles is filled with water, into the lower part of which the bowl of a thermometer is plunged. When this marks the degree of heat desired, 149° of Fahrenheit for instance, the basket is withdrawn. It will not do to put in another immediately, the too warm water might break the bottles. A portion of the heated water is taken out and replaced with cold, to reduce the temperature to a safe point, or, better still, the bottles of the second basket may be prepared by warming, so as to be put in as soon as the first comes out. The expansion of the wine during the heating process tends to force out the cork, but the twine or wire holds it in, and the wine finds a vent between the neck and the cork. During the cooling of the bottles, the volume of the wine having diminished, the corks are hammered in further, the tying is taken off, and the wine is put in the cellar, or the ground floor, or the second story, in the shade, or in the sun. There is no fear that any of these different modes of keeping it will render it diseased, they will have no influence except on its mode of maturing, on its colors, &c. It will always be useful to keep a few bottles of the same kind without heating it, so as to compare them at long intervals with that which has been heated. The bottle may be kept in an upright position, no mould will form, but perhaps the wine will lose a little of its fineness under such condition, if the cork gets dry, and air is allowed too freely to enter."

Mr. Pastuer affirms that he has exposed casks of wine thus heated in the

pen air or terrace, with northern experience, from April to December, without ny injury resulting.

Wine in casks may be heated by introducing a tin pipe through the bung-le, which shall descend in coils nearly to the bottom and return in a straight ne and through the pipe imparting steam. If, after thus being once heated, here is such an exposure to air, as by drawing off and bottling, as to admit a esh introduction of "parasites," the disease thus introduced may be easily ured by heating a second time.

Mr. Pastuer claims also to have discovered and proved that wine can be dvanced in ripening and improved by "æriation" conducted by a slow and ntle manner. This is a bold assertion, but such confidence is felt in the value f suggestions coming from him that both of his methods, cutting, as they will, tangle of old theories, will have a fair trial by his countrymen, and that without delay.

Your committee would say, in conclusion, that from what comparison we have een able to make between the better samples of American wines now on exhibition at the "Paris Exposition," with foreign wines of similar character, as well as from the experience of many European wine-tasters, we have formed a igher estimate of our own ability to produce good wines than we had heretore; and from our investigations in vine culture we are now more confident han ever that America can and will be a great wine-growing country. All hat is necessary for us to rival the choicest products of other parts of the world, will ere long come with practice and experience. We have already several excellent varieties of the grape borne on American soil, and suited to it a soil extensive and varied enough for every range of quantity and quality. Who would discover a patch of ground capable of yielding a "Johannesberger," a "Tokay," or a "Margeaux," need only make diligent and careful search, and, somewhere between the lakes and the gulf and the two oceans that circumscribe our vineyard territory, will be sure to find it.

Accompanying this report is a paper from William Griffith, of Pennsylvania, on the propagation of the vine referred to us. This is deemed of such importance as to justify its publication entire without comments on the subject by your committee.

Finally, your committee cannot close this report without acknowledging the many courtesies extended to them by European exhibitors and commissioners in facilitating the investigations incident upon the discharge of their duties.

MARSHALL P. WILDER,
ALEXANDER THOMPSON,
WILLIAM J. FLAGG,
PATRICK BARRY,
Committee.

SUPPLEMENTAL REPORT.

The committee, since making their report on the third branch of the subject given them in charge, have visited the principal vine districts of Switzerland and Germany, and deem some of the observations there made worth being embodied in the supplemental report now submitted.

The vineyards to which attention was more especially given were those of the borders of Lake Geneva, those of Pfalz or Rhenish Bavaria, and of the banks of the Rhine, the Neckar, and the Main.

With regard to the quality of the soil, we have the same remark to make here as was made in the former report, viz, that the vines yielding the best wine were found to be growing on the poorest soil. Geologically, the soil throughout all the above districts is very much the same, viz, basalt and sandstone, both formations usually seen in close proximity, the basalt uppermost and resting on

the other. The only exceptions were a few patches of limestone and slate The basalt soil is esteemed richer than the sandstone, and is often hauled on t the other to enrich it. For instance, the vine-dressers of Durkheim actuall manure their thin, poor, gravelly land with tens of thousands of yards of earth brought from the neighboring town of Deidesheim, and yet the Durkheim win is quite superior to that of their neighbors. All this was quite different fro anything we noticed in France; there, calcareous rocks seem to underlie every where, nor could we learn of any wine of high repute in France, that derived it quality from sandstone or basalt. The vine husbandry of the Swiss and German is of the first order. Nowhere do you see in their vineyards the straggling appearance so common in those of France, (the effect of frequent layering; but the lins were always beautifully true and even. Although the intervals o rows werewide enough for the plough to pass, nearly all the cultivation wa done by hand, and done most thoroughly, too In France, as in America, the stir the ground two or three times during the season. In the Rhinegan it i done four times; but about Forst Deidesheim and Durkheim they do it a often as every two or three weeks from the beginning to the end of the season It is in the above neighborhood that basaltic earth is applied as a manure, as i also clay, to make the ground more retentive of manure; and this they do t such an extent that old vine fields are seen which have been raised visibly abov the level of the others adjoining them.

NOTE.—Some years since the vineyard of F. T. Buhl, of Deidesheim, produced wine o the natural soil of a very inferior quality, selling at fifty centimes the titre, at a very grea expense. The whole vineyard was covered to the depth of three feet by volcanic or basalti earth brought from a distance of several miles. The experiment at the time was thought t be a very hazardous one, but the enhanced value of the wines after the addition prove that the owner was wiser than his neighbors.

The expenditure of labor in a year on an acre of those fields amounts to abou one hundred and forty days' work. In the Pflaz, it is usual to train upon hori zontal laths or lines of wire running fifteen inches above the ground, very muc as is done in Medoc, only that where wire is used a second line is stretched above the other. If the plan is good in *Medoc* and the Pflaz, it is hard to see why it would not be good everywhere, especially in countries so cold as Ger many and the northern part of the United States. Indeed, Mr. Guyot, to whos book we have already referred, argues strongly in favor of everywhere adopt ing the method of training the fruit-bearing cane horizontal with the ground and very close to it. We ought, however, to note here, that the fields where this mode was more particularly noticed, or connected with good results, were in gravelly deposits of nearly level surface Manure is freely used in Germany, much more so than in France, and is prepared and applied with much care and system. *Cow manure*, largely composted with straw, is the only kind thought fit to manure vines. They sprinkle the heaps almost daily to keep them moist and allow the mass to rot, at least twelve months before being used. It is applied every three years. As to quantity, it is certain that some soil, like the poor and unretentive gravel beds of the Pflaz, should receive more than those of the neighboring slopes, and that the calcareous earths of France need less than the sandstone and the basaltic earths of the Rhine valley.

Guyot, arguing strongly in favor of manure, recommends the French culti vator to put on at intervals of three years a quantity of manure that will be equivalent in weight to that of the fruit he has taken off at vintage, while Mr. Herzmansky, the steward at Johannesberg, who tills some 50 acres of vines, keeps about 40 very large cows in his stables. *But will not manuring hurt the quality of the wine?*

In our former report we say that this is an open question as yet, and so it is in France, and Mr. Guyot treats it as such in arguing upon it. Of course none will doubt that were a vineyard to be treated in this respect, as we treat

e soil of a grapery, very poor wine would be produced, and the only question will a moderate quantity do harm? This is precisely the question the committee put to Mr. Herzmansky, the intelligent and thoroughly experienced irector at Johannesberg, where the best wine in the world is made. His swer was, "No. As we apply it on this soil it does not impair the quality the wine in any degree; on the contrary, it improves the flavor." Then he d the way to his well-ordered cow stables, and pointing to the compost heaps marked, "There is the beginning of Johannesberger."

NOTE.—The vineyard of F. T. Buhl, alluded to in a previous note, is fertilized by a compost made of wood-ashes, stable manure, and earth. This is applied in the spring in trenches ug to the depth of about ten inches and again covered with earth; the application is made this manner to every alternate row of the vineyard. The following year the same process is gone through with in the remaining rows, by the removal of the soil as previously ated, and the treatment of manure as just detailed; this vineyard now produces wine of a ery superior quality of a delicious bouquet, rich in saccharine matter, and alcohol, and possing all those excellences that we prize in a first-class wine, and is now readily selling at welve francs the titre. To which is this wine most indebted for the extraordinary change its character, to the volcanic soil, or the manure which is annually buried in the vineyard?

Now Johannesberger is the most delicate of wine, as it is indeed superlative n every respect. By the kind invitation of the Princess Metternich the committee were allowed to taste specimens of the best the castle cellar contained, ncluding some that was 21 years old in the cask, and some from a cask that was *par excellence*, called the "bride of the cellar," and the opinion formed was hat the quality of Johannesberger is such that it cannot be described, and can e communicated only to the organs of taste, nor can it be understood or even magined, except by those who are so highly favored as to have a taste of it. But this marvellous wine is but the crowning product of the famous district of he Rhinegan, or that portion of the valley lying just north of Mayence, a strip less than ten miles in length, whose fruit yields a juice which surpasses all thers of the world, combining richness with flavor and delicacy with strength. The soil of the Rhinegan seems to be of a red sandstone mostly, if not wholly. Johannesberg hill reminds one strongly of the soil of some parts of New Jersey and Connecticut, and in the neighborhood of New Haven, in the latter State, the "basalt" is seen resting upon the red stone, just as it does upon the hills that skirt the Rhine. Nearly all the German and Swiss wines, and, indeed, nearly all the grapes grown in Germany and Switzerland, are white, for which the soil and climate of the former country seems peculiarly adapted, while at the same time unsuited for ripening colored grapes to the tint needed in a true red wine. The peculiarity of the better sort of Rhenish wines is "bouquet," and of the inferior sort, acidity compared with them; their French rivals are quite negative, and so are those of Switzerland. A French wine, white or red, must be very poor indeed if it shows any acidity, and must be very fine indeed if it possesses any easily-tasted "bouquet." Altogether, we must award the palm of excellence to the white wines of the Rhine, as we do to the skill and industry of the vine dressers who produce them In considering the merits of the different soils as geologically distinguished from each other, we seem drawn to the conclusion that, so far as our observation has gone, the red sandstone is the superior one, but we confess ourselves unfit to make any such sweeping generalization, and will only say that the soil in question, for aught we can see, seems as fit as any other to grow a superior wine. The difference between wine made by fermenting the bruised grapes, juice, skin, pulp, and seeds altogether, and called "red wine," and that made by pressing immediately after gathering and fermenting its pressed juice by itself, called "white wine," is not a difference of color alone. For certain bodily temperaments, and for certain conditions of health, possibly, too, for the peculiar constitution of the German people, *white wine* may be the best. And to that of the Rhine country *Leibig* attributes the virtue of being an antidote for calculus and gout. But all this being admitted,

the better reasons seem to favor the production and use of the red wine i preference to the white where it can be done. The testimony we have obtaine from the best sources of knowledge on this point amount to this:

Red wine is much less heating, much more tonic, much less exciting to th nerves, much less intoxicating to the brain, and its effects are more durin than white wine. As we of America are, by reason of our dry climate, as we as from moral causes, more excitable, both from brain and nerve, than th Europeans, and at the same time much oftener in need of tonic diet, an our summer heats are so much more intense than in the wine latitudes o Europe, all the above considerations should have peculiar weight with us So highly, at least, do the French people appreciate them that they con sume now little white wine, and it bears always a lower price in the marke than red of equal quality. To the general consumption of this drink intelli gent Frenchmen are apt to attribute the fine health of their peasantry, as wel as their habitual gaiety and habitual temperance. (The habitual use of *whiskey* has quite another effect.) An American gentleman, for many years residing i France, and for a time a professor in one of the universities, affirms that th greatest longevity is among those people who take red wine three times a day and abstain from both tea and coffee. When Americans consult French physi cians, three times in four they are ordered to drink red wine as a habitual bev erage, and one of the commonest daily events among Americans residing i Paris is the cure of an obstinate dyspepsia by the same simple remedy, even i the unhealthful air of that city.

The German vineyards have hitherto escaped any very serious ravages fro the "vine disease." It is met as often as it appears, and successfully combatte with sulphur. Three applications are made, the first as soon as the berries hav grown to be as large as the head of a pin. Early in the day, and before th dew is dried off, the flour is sprinkled on the lower surface of the leaves, where the moisture causes it to attach. The implement used is a tube of tin, perfor ated with numerous small holes at the lower end, and with a tassel of woole yarn attached to that end. At Rheims we were shown a large vine, trained t a wall, one-half of which had been treated as above in the spring of the yea before and the other half neglected. The latter had, as a consequence, lost all of its fruit, and we visited the place and saw it the following season. It showe yellow and falling leaves in July, and very little fruit, while the other portion was perfectly healthy, and was loaded with a good crop of fruit. This experi ment was made by a French gentleman, who had recently returned from a long sojourn in America, and visited that country for the purpose of satisfying him self if the sulphur be really a preventive or not against the vine disease, o which he had heard so many doubts expressed while in America.

MARSHALL P. WILDER,
ALEX. THOMPSON,
W. J. FLAGG,
PATRICK BARRY,
Committee No. 9 United States Commission.

METEOROLOGY.

[Compiled in the Department of Agriculture, from the reports made by the observers for the Smithsonian Institution.]

FEBRUARY, 1868.

Table showing the highest and lowest range of the thermometer, (with dates prefixed,) the mean temperature, and amount of rain and melted snow, (in inches and tenths,) for February, 1868, at the following places, as given by the observers named. Daily observations were made at the hours of 7 a. m. and 2 and 9 p. m.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow.
MAINE.				°		°	°	*In.*
Teuben	Washington	J. D. Parker	21	45	12	—13	16.9	3.70
Williamsburg	Piscataquis	Edwin Pitman	20	36	11	—16	10.2	2.00
West Waterville	Kennebec	B. F. Wilbur	9, 20	38	8, 12, 25	—12	14.8	1.85
Gardiner	do	R. H. Gardiner	20	44	12	—12	16.9	1.87
Lisbon	Androscoggin	Asa P. Moore	.....	.....	.....	.....	.....	0.83
Standish	Cumberland	John P. Moulton	21	47	8	—18	14.8	1.73
Norway	Oxford	Howard D. Smith	20	44	12	—22	12.9	1.30
Cornish	York	Silas West	21	42	8	—11	15.3	1.10
Cornishville	do	G. W. Guptill	21	41	23	—10	16.6	3.00
Averages							14.8	1.93
NEW HAMPSHIRE.								
Portsmouth	Rockingham	John Hatch	21	50	8	— 7	21.0	2.78
Stratford	Coos	Branch Brown	20	36	8	—24	9.3	2.00
Shelburne	do	F. Odell	20	46	26	—22	9.4	0.86
North Barnstead	Belknap	C. H. Pitman	24	46	3	— 4	18.3	1.23
Concord	Merrimac	John T. Wheeler	20	45	12	—15	17.9	.....
Averages							15.2	1.72
VERMONT.								
Lunenburg	Essex	H. A. Cutting	20	37	24	—27	8.9	1.45
North Craftsbury	Orleans	Edward P. Wild	20	42	3, 12	—12	14.4	1.60
Randolph	Orange	Charles S. Paine	20	41	8	—31	10.2	0.55
Middlebury	Addison	H. A. Sheldon	20	36	8	—27	11.4	1.15
St. Albans	Franklin	A. H. L. Gilman	20	38	23	—27	8.1	.....
Averages							10.6	1.19
MASSACHUSETTS.								
Kingston	Plymouth	G. S. Newcomb	21	52	8	— 2	24.8	1.70
Topsfield	Essex	S. A. Merriam	21	48	8	— 7	17.9	1.23
Georgetown	do	S. A. Nelson	21	49	8	— 8	19.5	1.12
Newbury	do	John H. Caldwell	21	49	8	— 5	20.4	0.60
Milton	Norfolk	Rev. A. K. Teele	21	55	8	—13	21.6	1.96

Table showing the range of the thermometer, &c., for February—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow
MASS.—Continued.				°		°	°	*In.*
Brookline	Norfolk	Rev. J. B. Perry	21	59	8	—10	23. 6	.....
North Billerica	Middlesex	Rev. E. Nason	21	51	8	—22	19. 6	.....
West Newton	....do	John H. Bixby	21	55	8	—20	18. 8	1. 50
New Bedford	Bristol	Samuel Rodman	21	52	8	— 1	23. 7	2. 35
Worcester	Worcester	Jos. Draper, M. D	21	48	23	— 4	19. 2	1. 55
Mendon	....do	Jno. G. Metcalf, M. D	21	48	3, 23	— 6	17. 5	.....
Lunenburg	....do	Geo. A. Cunningham	21	49	23	— 8	18. 9	1. 45
Amherst	Hampshire	Prof. E. S. Snell	21	45	8	—18	18. 2	1. 08
Richmond	Berkshire	Wm. Bacon	20	44	23	—10	17. 4	4. 50
Williams College	....do	Prof. A. Hopkins	19, 20	40	8	—19	16. 1	1. 95
Averages							19. 8	1. 74
RHODE ISLAND.								
Newport	Newport	Wm. H. Crandall	21	56	23	4	26. 1	4. 95
CONNECTICUT.								
Pomfret	Windham	Rev. D. Hunt	21	45	23	— 6	18. 5	1. 80
Columbia	Tolland	Wm. H. Yeomans	21	48	8, 23	— 4	21. 7	2. 20
Middletown	Middlesex	Prof. John Johnston	21	63	8	— 9	20. 8	1. 53
Colebrook	Litchfield	Charlotte Rockwell	20, 21	42	23	—12	16. 8	.....
Groton	New London	Rev. E. Dewhurst	21	52	8	— 6	22. 1	3. 10
Averages							20. 0	2. 16
NEW YORK.								
Moriches	Suffolk	E. A. Smith & daugh'r	21	55	8	—15	26. 0	2. 54
South Hartford	Washington	G. M. Iugalsbe	20	44	23	—25	15. 5	1. 45
Troy	Rensselaer	Jno. W. Heimstreet	20	42	8	—16	17. 0	0. 86
Germantown	Columbia	Rev. S. W. Roe	19, 20	44	12	—14	18. 0	1. 30
Garrison's	Putnam	Thomas B. Arden	20	47	12	—10	19. 0	1. 55
Throg's Neck	Westchester	Miss E. Morris	21	53	23	— 2	22. 3	.....
Deaf and Dumb Inst.	New York	Prof. O. W. Morris	21	50	23	1	23. 0	2. 31
Columbia College	....do	Prof. Chas. A. Joy	21	51	23	6	25. 8	1. 02
Flatbush	King's	Eli T. Mack	21	51	8	0	26. 3	0. 57
Newburgh	Orange	James H. Gardiner	19, 20	48	8	—18	19. 5	.....
Minaville	Montgomery	J. W. Bussing	20	36	23	—16	10. 1	0. 97
Gouverneur	St. Lawrence	C. H. Russell	20	43	3	—28	12. 4	1. 54
North Hammond	....do	C. A. Wooster	20	44	11	—21	14. 3	1. 39
South Trenton	Oneida	Storrs Barrows	20	48	3, 23	—14	12. 3	2. 60
Cazenovia	Madison	Prof. Wm. Soule	20	42	23	—17	15. 7	3. 18
Oneida	....do	S. Spooner, M. D	20	48	3	—14	18. 6	2. 50
Houseville	Lewis	Walter D. Yale	20	43	3	—20	13. 4	1. 61
Depauville	Jefferson	Henry Haas	20	40	•3	—18	15. 8	3. 51
Theresa	....do	S. Gregory	9	34	11	—26	.....	1. 95
Oswego	Oswego	Wm. S. Malcolm	20	41	11	— 8	18. 8	2. 25
Palermo	....do	E. B. Bartlett	20	39	11	—19	14. 9	2. 90
Nichols	Tioga	Robert Howell	20	50	8	—20	18. 0	.....
Newark Valley	....do	Rev. Sam'l Johnson	20	46	7	—32	.....	.....
Geneva	Ontario	Rev. Dr. W. D. Wilson	20	42	23	— 5	19. 8	1. 09
Rochester	Monroe	Henry W. Mathews	20	45	11	— 2	20. 7	1. 59
Do	....do	W. L. M. Fiske, M. D	20	45	11, 23	— 2	20. 4	1. 59
Little Genesee	Allegany	Daniel Edwards	20	52	8	—19	17. 4	1. 83
Buffalo	Erie	Wm. Ives	20	41	3, 11	— 1	20. 9	2. 83
Averages							18. 3	1. 87

Table showing the range of the thermometer, &c., for February—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow.
NEW JERSEY.				°		°	°	*In.*
terson	Passaic	Wm. Brooks	21	51	8	— 6	21.4	1.38
wark	Essex	W. A. Whitehead	21	51	4	— 4	21.9	1.62
w Brunswick	Middlesex	Geo. H. Cook	21	46	8	—10	20.4	1.54
enton	Mercer	E. R. Cook	21	50	8	— 4	26.8	2.20
rlington	Burlington	John C. Deacon	20	52	8	— 5	26.5	2.10
borestown	....do	Thos. J. Beans	20	53	8	— 5	23.0	2.44
unt Holly	....do	M. J. Rhees, M. D	20	52	8	— 2	24.8	.....
ver	Morris	Howard Shriver	21	49	12	— 7	20.7	1.45
ddonfield	Camden	Samuel Wood	20	50	8	— 3	24.1	2.25
wfield	Gloucester	E. D. Couch	20, 21	53	8	— 7	26.1	.....
eenwich	Cumberland	R. C. Sheppard	21	50	8	3	26.6	1.86
neland	....do	John Ingram, M. D	21	52	8	— 6	24.3	4.06
Averages							23.9	2.09
PENNSYLVANIA.								
yces	Pike	John Grathwohl	19	49	8	—20	18.0	1.28
llsington	Bucks	Eben'r Hance	20	55	8	— 6	23.7	2.30
iladelphia	Philadelphia	Prof. J. A. Kirkpatrick	20	51	23	4	26.6	2.59
rmantown	... do	Thomas Meehan	19	46	8	— 2	23.0	2.00
rsham	Montgomery	Miss Anna Spencer	20	53	8	— 4	23.6	1.80
ymouth Meeting	....do	Marcus H. Corson	20	50	8	— 7	22.8	1.46
yberry	Wayne	Theodore Day	20	47	8	—27	13.6	1.60
hitehall	Lehigh	Edward Kohler	21	50	4	— 7	21.5	1.55
rkesville	Chester	F. Darlington, M. D	20	48	8	—10	21.6	2.11
ading	Berks	J. Heyl Raser	21	53	8	— 1	24.5	.....
phrata	Lancaster	W. H. Spera	20, 21	52	8	— 4	24.9	2.10
lver Spring	....do	H. G. Bruckhart	20	48	8	— 8	23.8	.....
unt Joy	....do	J. R. Hoffer	20	53	8	— 2	2.56	1.95
rrisburg	Dauphin	John Heisely, M. D	21	49	4	2	23.5	1.76
kesburg	Perry	Wm. E. Baker	20, 21	53	8	—15	21.1	1.77
wisburg	Union	Prof. C. S. James	19	48	8	—18	18.0	1.57
st Tioga	Tioga	E. T. Bentley	20	55	8	—22	20.0	1.02
rampian Hills	Clearfield	Elisha Fenton	20	50	8	—16	16.6	3.80
hnstown	Cambria	David Peelor	19, 20, 21	46	1	—14	21.8	4.55
ranklin	Venango	Rev. M. A. Tolman	20	50	3	—24	18.6	.....
nnellsville	Fayette	John Taylor	20	56	3	—12	24.4	.....
eaver	Beaver	Rev. R. T. Taylor	20	50	3	0	27.4	2.75
w Castle	Lawrence	E. M. McConnell	19, 20	50	3	—10	25.2	.....
anonsburg	Washington	Rev. W. Smith, D. D	20	57	3	— 7	26.5	1.03
Averages							22.4	2.05
MARYLAND.								
oodlawn	Cecil	Jas. O. McCormick	20	52	8	— 1	24.4	2.87
atonsville	Baltimore	George S. Grape	21	50	23	6	24.8	.....
nnapolis	Anne Arundel	Wm. R. Goodman	19	56	8	— 1	31.3	2 31
t. Inigoes	St. Mary's	Rev. J. Stephenson	20	60	26	13	31.0	2.60
mmittsburg	Frederick	Eli Smith	20	52	8	— 8	24.6	.....
lt. St. Mary's Coll	....do	Prof. C. H. Jourdan	19, 20	49	8	2	23.9	1.61
Averages							26.7	2.35
VIRGINIA.								
ape Charles L. H	orthampton	Mrs. J. G. Potts	19	55	12	22	40.1	.....
urry C. H	Surry	B. W. Jones	20	69	12	11	36.5	.....

Table showing the range of the thermometer, &c, for February—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow
VIRGINIA—Con.				°		°	°	*In.*
Comorn	King George	E. Tayloe	20	58	1, 8	3	.....	0. 2
Lynchburg	Bedford	C. I. Merriwether	19	57	2, 7, 8	20	36. 0	.....
Snowville	Pulaski	J. W. Stalmaker	21	58	1	— 8	30. 0	7. 7
Wytheville	Wythe	James A. Brown	20	56	1	— 8	31. 2	1. 7
Averages							34. 8	3. 2
WEST VIRGINIA.								
Romney	Hampton	W. H. McDowell	19	62	8	6	31. 3	.....
Grafton	Taylor	W. H. Sharp, M. D	19, 20	60	1	— 2	32. 8	4. 6
Cabell C. H	Cabell	C. L. Roffe	24	60	1	9	36. 7	0. 6
Burning Springs	Wirt	Rob't H. Bliven	16, 19	73	1	— 2	32. 9	.....
Averages							33. 4	2. 6
NORTH CAROLINA.								
Goldsboro'	Wayne	E. W. Adams, A. M	20	69	8	20	40. 6	2. 2
Oxford	Granville	Wm. R. Hicks, M. D.	20	60	8	17	35. 7	3. 2
Raleigh	Wake	Rev. F. P. Brewer	20	66	8	15	35. 3	3. 0
Albemarle	Stanley	F. J. Kron	20	69	8	12	37. 1	3. 9
Statesville	Iredell	Thos. A. Allison	17	52	13	14	32. 3	3. 7
Asheville	Buncombe	E. I. Aston	20	62	1	4	36. 5	.....
Kenansville	Duplin	Prof. N. B. Webster	21	65	.....	.....	.....	.....
Averages							36. 3	3. 2
SOUTH CAROLINA.								
Aiken	Barnwell	John H. Cornish	17	65	7	25	34. 6	3. 3
Gowdysville	Union	Charles Petty	20	64	1	19	38. 9	.....
Averages							36. 8	3. 3
GEORGIA.								
Atlanta	Fulton	F. Deckner & Son	22	68	7	17	40. 8	3. 5
Macon	Bibb	Jno. A. Rockwell	19	68	1	26	47. 4	6. 8
Averages							44. 1	5. 2
ALABAMA.								
Moulton	Lawrence	Thos. M. Peters, A. M.	9, 21	62	7	22	44. 7	2. 2
Carlowville	Dallas	H. L. Alison, M. D	9	72	1	30	49. 2	6. 7
Fish River	Baldwin	W. J. Van Kirk	19, 23	72	1	27	.....	4. 6
Opelika	Lee	J. H. Shields	17	68	7	25	47. 6	.....
Greene Springs	Hale	J. W A. Wright	22	72	1	22	48. 4	3. 0
Havana	do	Sam'l K. Jennings	17, 22	70	1	22	47. 4	2. 7
Averages							47. 5	3. 8
FLORIDA.								
Jacksonville	Duval	A. S. Baldwin	10, 21	78	7	36	54. 0	2. 2
Port Orange	Volusia	J. M. Hawks	10	84	29	40	56. 8	.....
Lake City	Columbia	Galen M. Fisher	9	73	1, 7, 29	35	53. 7	.....
Do	do	E. R. Ives	21, 25	78	1	30	57. 5	8. 2
Averages							55. 5	5. 2
TEXAS.								
Waco	McLellan	Edw. Merrill, M. D	19	76	11, 12	22	47. 6	2. 2
Austin	Travis	J. Van Nostrand	20	83	12	26	54. 6	3. 4
Houston	Harris	Miss E. Baxter	19, 25	82	12	31	55. 6	.....
Averages							52. 6	2. 8

Table showing the range of the thermometer, &c., for February—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow.
MISSISSIPPI.				°		°	°	*In.*
renada	Yalabusha	Albert Moore	22	76	12	20	49.9	.....
atchez	Adams	Wm. McCary	9, 24	74	1, 12	25	45.7	3.38
Averages							47.8	3.38
ARKANSAS.								
elena	Phillips	O. F. Russell	22	76	12	15	45.6	.....
TENNESSEE.								
nsculum College	Green	S. S. and Rev. W. S. Doak.	20	61	1	3	36.0	.....
ookout Mountain	Hamilton	Rev. C.F.P. Bancroft	21, 22	63	7	14	41.2	.....
arksville	Montgomery	Prof. W. M. Stewart	23	67	1, 2, 10	19	39.9	1.31
emphis	Shelby	Edw. Goldsmith	23	72	11	18	43.0	1.28
lizabethton	Carter	Charles H. Lewis	20	60	1	9	36.8	.....
Averages							39.4	1.30
KENTUCKY.								
hilesburg	Fayette	Sam'l D.Martin,M.D.	19	59	7	4	33.5	2.05
ouisville	Jefferson	Mrs.L. Young	19	57	7	6	35.0	1.60
anville	Boyle	O. Beatty	19	71	7	5	39.3	1.59
exington	Fayette	S. R. Williams	20	60	7	8	34.2	1.96
Averages							35.5	1.80
OHIO.								
ew Lisbon	Columbiana	J. F. Benner	20	50	3	—14	23.1	1.55
eubenville	Jefferson	Joseph B. Doyle	19, 20	46	3	0	28.0	.....
ainesville	Lake	E. J. Ferris	20	48	3	3	22.5	1.56
ilnersville	Guernsey	Rev. D. Thompson	20	52	3	— 8	23.6	1.12
leveland	Cuyahoga	Mr. & Mrs.G.A.Hyde	20	48	3	— 3	23.2	1.47
Do	do	T. A. Smurr, M. D.	20	56	3	0	25.0	.....
ooster	Wayne	Martin Winger	20	52	3	—12	25.2	.....
allipolis	Gallia	Alex. P. Rodgers	20	55	1	7	33.1	1.18
elley's Island	Erie	Geo. C. Huntington	20	48	3	— 5	23.9	0.83
ndusky	do	Thomas Neill	20	50	3	—12	23.8	0.88
orwalk	Huron	Rev. A. Newton	20	52	3	—14	24.4	0.84
reenwich Station	do	Mrs. M. M. Marsh	20	51	3	—13	25.1	0.55
orth Fairfield	do	O. Burras	20	51	3	—13	24.1	0.94
Vesterville	Franklin	Prof. Jno. Haywood.	19	53	3	—10	24.7	0.95
arion	Marion	H. A. True, M. D.	19, 20	47	3	— 9	23.6	1.00
Villiamsport	Pickaway	John R. Wilkinson	24	69	3	— 2	31.7	1.82
oledo	Lucas	J. B. Trembly, M. D.	20	46	3	—10	23.1	1.06
owling Green	Wood	John Clarke	20	52	3	—18	24.9	1.99
entou	Hardin	C. H. Smith, M. D.	5, 15	49	3	2	31.2	1.72
rbana University	Champaign	M. G. Williams	19	49	3	— 4	25.1	1.03
illsboro'	Highland	J. McD. Mathews	24	54	3	2	28.3	0.68
ethel	Clermont	Geo. W. Crane	24	54	1	— 1	27.4	0.70
incinnati	Hamilton	Geo. W. Harper	20	51	7	6	31.0	0.57
Do	do	R. C. Phillips	21	52	7	14	35.3	0.88
ollege Hill	do	John W. Hammitt	21, 24	48	7	0	29.8	0.25
Averages							26.4	1.07

Table showing the range of the thermometer, &c., for February—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow
MICHIGAN.				°		°	°	*In*
Monroe City	Monroe	Miss F. Whelpley	15	47	3	—21	22.5	0.9
Alpena	Alpena	J. W. Paxton	20	39	10	— 2	17.4	2.7
State Agricult'l Col.	Ingham	Prof. R. C. Kedzie	20	44	3	—19	18.7	1.2
Litchfield	Hillsdale	R. Bullard	20	46	3	—30	18.7	1.5
Grand Rapids	Kent	E. S. Holmes, D.D.S.	20	48	3, 10	— 6	21.3	1.5
Northport	Leelanaw	Rev. Geo. N. Smith	20	44	13	— 4	18.0	3.4
Otsego	Allegan	Milton Chase, M.D.	18	55	3, 10	—10	26.0	1.5
Holland	Ottawa	L. H. Streng	16, 20	47	7	— 2	23.5	1.4
Copper Falls	Keweenaw	Dr. S. H. Whittlesey	19	40	12	—16	8.1	4.4
Ontonagon	Ontonagon	Edwin Ellis, M. D.	18, 19	40	10	—22	11.9	.....
Averages							18.6	2.1
INDIANA.								
Aurora	Dearborn	Geo. Sutton, M. D.	24	60	1	0	30.3	1.1
Vevay	Switzerland	Chas. G. Boerner	19	60	7	5	33.7	0.9
Muncie	Delaware	G. W. H. Kemper, M.D	24	55	1	— 6	26.5	1.5
Columbia City	Whitley	Dr. F. and Miss L. McCoy.	21	50	3	—14	21.9	.....
Indianapolis	Marion	W. J. Elstun, M. D.	24	56	11	1	26.9	1.1
Merom	Sullivan	Thomas Holmes	24	59	10	1	30.8	1.0
New Harmony	Posey	John Chappellsmith	24	60	10	7	36.2	0.8
Carthage	Rush	Charles M. Hobbs	24	54	3	— 6	25.0	0.5
Averages							28.9	1.0
ILLINOIS.								
Chicago	Cook	J. G. Langguth, jr.	20	56	10	— 9	27.8	0.9
Near Chicago	....do	Samuel Brookes	24	54	7	—12	24.3	.....
Golconda	Pope	Wm. V. Eldredge	26	82	10	10	40.1	0.6
Aurora	Kane	A. & E. D. Spaulding	20	51	10	—27	21.3	1.0
Sandwich	De Kalb	N. E. Ballou, M. D.	20	48	10	—25	19.7	0.8
Ottawa	La Salle	Mrs. E. H. Merwin	20	55	3	—12	22.0	1.4
Winnebago	Winnebago	J. W. & Miss Tolman	20	47	10	—26	18.3	0.7
Hennepin	Putnam	Smiley Sheppard	20	56	10	—14	25.0	.....
Magnolia	....do	Henry K. Smith	19	62	3	—16	23.3	0.8
Rochelle	Ogle	Daniel Carey	20	50	10	—32	19.0	0.5
Wyanet	Bureau	E. S. & Miss Phelps	19	63	10	—16	24.1	0.5
Tiskilwa	....do	Verry Aldrich	20	49	10	—13	24.4	.....
Elmira	Stark	O. A. Blanchard	20	56	10	— 8	24.9	0.8
Peoria	Peoria	Frederick Brendel	20	55	1	— 6	26.8	0.7
Springfield	Sangamon	G. M. Brinkerhoff	20	63	10	— 2	26.9	.....
Waterloo	Monroe	H. Künster	24	68	10	5	35.7	.....
Dubois	Washington	Wm. C. Spencer	24	56	11	0	26.1	0.5
Galesburg	Knox	Prof. W. Livingston	20	61	10	— 7	24.5	0.4
Mount Sterling	Brown	Rev. A. Duncan	20	58	10	— 6	29.0	.....
Andalusia	Rock Island	E. H. Bowman, M. D	16, 19	52	10	—20	26.4	.....
Augusta	Hancock	S. B. Mead, M. D.	16, 20	56	10	— 6	28.5	0.8
Ridge Farm	Vermillion	Dr. B. C. Williams	24	60	10	— 4	29.3	.....
Marengo	McHenry	O. P. Rogers	20	48	10	—27	20.4	0.9
Wapello	De Witt	T. Lonis Groff	24	58	3	—15	27.4	1.0
Averages							25.6	0.7
WISCONSIN.								
Manitowoc	Manitowoc	Jacob Lüps	16, 20	47	10	—17	19.3	1.3

Table showing the range of the thermometer, &c., for February—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melt'd snow.
WISCONSIN—Con.				°		°	°	*In.*
ymouth	Sheboygan	G. Moeller	16, 18, 20	43	10	—27	17.0	2.00
lwaukee	Milwaukee	I. A. Lapham, LL.D	19	56	10	—14	21.3	0.92
neva	Walworth	Wm. H. Whiting	20	48	10	—12	20.2	0.68
aupacca	Waupacca	H. C. Mead	18, 20	48	10	—27	17.4	.....
barrass	....do	E. Everett Breed	19	47	10	—23	15.1	3.40
gerton	Rock	Henry J. Shintz	20	56	10	—32	18.6	0.80
raboo	Sauk	M. C. Waite	20	52	10	—30	16.0	4.13
w Lisbon	Juneau	J. L. Dungan	16	55	10	—40	17.4	.....
cky Run	Columbia	W. W. Curtis	20	49	10	—40	16.9	3.05
yfield	La Pointe	Andrew Tate	18	50	9, 12	—24	11.1	.....
Averages							17.3	2.04
MINNESOTA.								
. Paul	Ramsey	Rev. A. B. Paterson	18	45	10	—26	12.8	1.51
innеapolis	Hennepin	Wm. Cheney	18	46	10	—26	12.7	1.75
w Ulm	Brown	Charles Roos	16	42	10	—28	13.9	0.79
Averages							13.1	1.35
IOWA.								
linton	Clinton	Dr. P. J. Farnsworth	20	62	10	—25	23.5	1.00
nbuque	Dubuque	Asa Horr, M. D	18, 20	51	10	—23	20.6	1.03
onticello	Jones	M. M. Moulton	20	57	6, 9	—10	23.0	0.55
urlington	Des Moines	Mrs. James P. Love	20	63	10	— 5	29.1	0.45
ort Madison	Lee	Daniel McCready	20	57	10	—11	27.6	0.40
uttenberg	Clayton	Jas. P. Dickerson	18	53	10	—37	17.2	0.85
eres	....do	Jno. M. Hagensick	16, 20	48	10	—20	20.0	.....
ount Vernon	Linn	Prof. A. Collins	18	53	10	—20	21.2	.....
owa City	Johnson	Prof. Theo. S. Parvin	18, 20	55	10	—26	25.3	1.51
ndependence	Buchanan	Geo. Warne, M. D	18	52	10	—31	19.1	0.50
ear Independence	....do	Mrs. D. B. Wheaton	18	55	10	—36	15.1	0.95
Vaterloo	Black Hawk	T. Steed	18	52	10	—28	17.0	.....
Iarble Rock	Floyd	H. Wadey	18, 21	45	10	—25	18.6	0.83
Algona	Kossuth	Ph. Dorweiler	18	44	9	—20	16.7	1.11
Do	....do	James H. Warren	18	42	9	—20	15.3	.....
Dakotah	Humboldt	Wm. O. Atkinson	18	51	9	—20	18.3	.....
Boonesboro'	Boone	E. Babcock	18	55	10	—18	20.7	0.68
Fontanelle	Adair	A. F. Bryant	16, 18	58	10	—16	23.2	0.78
Logan	Harrison	Jacob F. Stern	16	58	9	—17	25.4	0.61
Whitesboro'	....do	David R. Witter	18	60	9	—17	22.5	0.65
Fort Dodge	Webster	C. N. Jorgensen	18	53	9	—17	19.9	0.77
Muscatine	Muscatine	J. P. Walton	20	53	10	—32	21.1	0.50
Rolfe	Pocahontas	Oscar I. Strong	18, 20	48	9	—24	16.5	1 30
Averages							20.7	0.86
MISSOURI.								
St. Louis University	St. Louis	Rev. F. H. Stuntebeck	24	65	10	5	34.9	0.41
Allenton	....do	A. Fendler	24	65	11	— 5	33.2	0.82
Hermitage	Hickory	Miss Belle Moore	22	69	11	— 7	33.5	0.15
Rolla	Phelps	Homer Ruggles	23	69	11	— 3	34.7	0.29
Harrisonville	Cass	John Christian	16, 21	66	9, 10	0	33.2	0.24
Jefferson City	Cole	Nicolas De Wyl	23	65	10, 11	4	33.0	.....
Averages							33.8	0.38

Table showing the range of the thermometer, &c., for February—Continued.

Stations, &c.	Counties.	Observers.	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain and melted snow
KANSAS.				°		°	°	I
Leavenworth	Leavenworth	J. Stayman, M. D.	16, 23	68	10	— 8	30.6	0.
Olathe	Johnson	Wm. Beckwith	16	69	10	— 4	32.0	1.
Atchison	Atchison	Dr. H. B. & Miss Horn	16, 18, 23	66	10	—10	29.6	0.
Holton	Jackson	Dr. James Watters	16	68	9	—10	30.7	0.
State Agricult'l Coll.	Riley	Prof. B. F. Mudge	17	69	9, 10	— 6	27.7	0.
Council Grove	Morris	A. Woodworth, M.D.	22	75	9	— 4	33.4	....
Baxter Springs	Cherokee	Ingraham & Hyland	22	78	11	1	36.9	0.
Lawrence University	Douglas	Prof. F. H. Snow	23	72	9	— 3	35.7	0.
Averages							32.1	0.
NEBRASKA.								
Elkhorn	Washington	John S. Bowen	16	69	9	—13	24.5	0.
De Soto	do	Charles Seltz	16	57	9	—17	23.3	0.
Glendale	Cass	Dr. A. L. & Miss Child	16	66	9	—22	24.0	1.
Dakota	Dakota	H. H. Brown	16, 18	56	9	—14	23.2	0.
Omaha Agency	(Reserve)	Rev. Wm. Hamilton	21	62	9	—14	25.3	0.
Averages							24.1	0.

NOTES OF THE WEATHER FOR FEBRUARY, 1868.

[Compiled in the Department of Agriculture from the reports of observers for the Smithsonian Institution.]

Steuben, Maine.—The coldest February on my record by 1°.4, and colder than usual by 6° to 14°.

Waterville, Maine.—Month remarkable for cloudy mornings and fair evenings; average temperature nearly 7°.5 below the eleven preceding Februarys.

Gardiner, Maine.—Mean temperature for 32 years, 20°.46; this February 6°.33. This month thermometer below 0 16 times; in 1856, 17 times.

Lisbon, Maine.—Ground under the snow frozen 31½ inches deep.

Norway, Maine.—An uncommonly clear, steady cold month; snow 36 inches on a level; water very scarce, some mills stopped, and wells failed that never failed before.

Cornish, Maine.—February average for 38 years, 18°.33; this month, 16°.61.

Stratford, New Hampshire.—Coldest February in 12 years. Thermometer above 32° but once since December 28, 1867—64 days.

North Barnstead, New Hampshire.—Water very low and many wells dry.

Shelburne, New Hampshire.—Streams low and water scarce; the ice was 18 inches thick on the Androscoggin on the 13th.

Concord, New Hampshire.—Ground in our streets frozen five feet deep.

Lunenburg, Vermont.—Water for all purposes scarcer than for many years.

Craftsbury, Vermont.—A cold, dry month; many wells have failed.

Middlebury, Vermont—Mean temperature of February lower than any month since January, 1857; on the 8th lower than since February, 1861; scarcity of water severely felt.

East Bethel, Vermont.—Mean temperature 3° colder than January; ice on mill ponds six to seven feet thick; wells and springs getting low.

Kingston, Massachusetts.—Remarkably cold month; the oldest inhabitant remembers no winter so severe.

Georgetown, Massachusetts.—Mill streams low; many mills stopped after the 10th; cross-roads badly drifted, and many small streams frozen solid.

Milton, Massachusetts.—We have had 40 snow storms this winter.

Lunenburg, Massachusetts.—Coldest February and coldest winter since 1849.

Pomfret, Connecticut.—Coldest February in 16 years by 7°.2 below average; and December, January, and February last past colder by 6°.4 than the average of the same months for 16 years past.

Moriches, New York.—The winter thus far more steadily and uniformly cold than I can remember. February mean temperature nearly 13° below that of 1867, 8⅔° below that of 1866, and 6° below that of 1865.

South Hartford, New York.—The winter the severest within 50 years, and the month unequalled for severity by any February in my memory. Mean temperature 15°.45, being 11° below the average of the last seven years. Snow about two feet on a level, but badly drifted; ground frozen three feet in open fields; no rain fall and no sign of thaw this year, and wells and springs failing every day. Some sudden changes during the month; 28° in 10 hours on the third; 30° in seven hours on the seventh, and 42° in 17 hours on the eighth.

Troy, New York.—Month one of the coldest known here. Mean temperature 8° below the average of February of last 11 years. Ice on the Hudson an average of 32 inches.

Garrisons, New York—Month unusually cold, with very frequent snows; snow now 18 inches in woods.

Newburgh, New York.—Ice in the channel of the river 20 to 24 inches thick.

Minaville, New York.—The month (and winter thus far) the severest remembered here, and the drought the greatest.

Depauville, New York.—The coldest, stormiest February known here in 36 years.

Houseville, New York.—Stormy, boisterous month; snow three feet deep; no thaw, and wells and streams very low.

Palermo, New York.—Coldest February in 15 years; thawed on the south side of the house only twice since Christmas.

Nichols, New York.—Coldest, severest February in many years; snow about three feet; ice on Susquehanna in some places about five feet; many roads impassable, many wells dry.

Geneva, New York.—Winter unusually cold and severe. February colder by 5°.64 than the February average of last 15 years. Lake frozen further from shore than known since this town was settled by the whites.

Rochester, New York.—Coldest February in many years. On 28th a severe snow storm; more fell than at any time this winter.

Little Genesee, New York.—Springs were never so low this century; but four wells in Olean village have water for 2,000 inhabitants.

Buffalo, New York.—February colder by 6° than in 10 years. Earth in our streets frozen four feet deep; water pipes bursting; good sleighing; snow seven inches; ice in the lake thicker than ever observed before.

Newark, New Jersey.—Such a February not experienced in 24 years; its mean temperature 2°.42 below that of the coldest, and 8°.98 below the average of the 24.

Trenton, New Jersey.—Month more continuously cold than for many years, yet dry, with steady sleighing.

Dover, New Jersey.—Sleighing and very severe cold since December 1, 1867.

Newfield, New Jersey.—Mean temperature about 9° below the average of the month for five years; and seldom more than one fair day at a time.

Greenwich, New Jersey.—Mean temperature 3° higher than January; snow on ground throughout; more skating than for 12 years past.

Fallsington, Pennsylvania.—Month 7° colder than the average of 10 past Februarys.

Philadelphia, Pennsylvania.—Coldest February in 17 years, and the coldest winter, except 1865–'6, in same period.

Horsham, Pennsylvania.—Month stormy almost throughout, with much snow and cold.

Dyberry, Pennsylvania.—Snow-fall, 16 inches for February and 65.8 inches for the season; ice between two and three feet thick. For five months ponds and swamps low and dry, and mills idle. The longest drought ever known here.

Reading, Pennsylvania.—Uniformly cold and healthy; no thaws since December, and good sleighing throughout.

Ickesburg, Pennsylvania.—This winter remarkable for continued cold, unusual amount of good sleighing, and moderate winds. Grain well protected by snow from 4 to 15 inches deep.

Lewisburg, Pennsylvania.—Coldest February on my record since 1856.

Tioga, Pennsylvania.—Month steadily cold; sleighing good; ground frozen 12 inches; ice 16 inches.

Grampian Hills, Pa.—This month colder than the average of February for three years past, and 13°.67 than February, 1867.

Connellsville, Pa.—Robin redbreast seen on 26th.

Woodlawn, Md.—Good sleighing the entire month, except two days; average temperature 14° below that of February, 1867; snow fell on eight days, about 15 inches, being double that of February, 1867.

Surry Court House, Va.—Month cold, cloudy, and wet.

Comorn, Va.—Month unusually inclement and unfavorable for farm work. Broadcast wheat has suffered much from freezing and thawing. Sixteen snows enumerated this winter; all light.

Wytheville, Va.—Woodchuck first seen on 18th, and bluebirds on 22d. requent rumbling thunder heard to northeast at 9 to 10 a. m. on 24th, with ermometer at 29°.

Burning Spring, West Va.—Little Kenawha open since 9th. Snow at no ne an inch and a half deep; greatest depth of frozen ground 18 inches. owest temperature of springs 38°; petroleum and water from a depth of 861 et, 58°.

Albemarle, N. C.—Crocus and hyacinth in bloom on 18th; wild geese on eir way north on 29th; a bright white one seen in a flock.

Kenansville, N. C.—Ground not frozen more than two inches; glow-worms en occasionally all winter. No thunder or lightning this year.

Aiken, S. C.—Thunder on 10th, and with lightning on 21st.

Gowdysville, S C.—Frogs heard on 15th; farmers sowing oats 20th; alder bloom 27th; distant thunder in northwest at 3 to 8 p. m. on 20th.

Atlanta, Ga.—Robins appear 15th; blackberry bushes leaf out 28th.

Moulton, Ala.—Chickasaw plums begin to bloom; prospect good for fruit.

Havana, Ala.—Distant thunder between 11 and 12 a. m. on 20th, and thunder, with some rain, on 26th. Frost on 1st, 7th, 12th, 28th, and 29th. Ground frozen 3½ inches on 1st.

Lake City, Fla.—Ice an inch thick on 1st; mocking birds appear on 3d, reflies on 5th, robins on 8th. Plums and peaches blossom on 10th. Frost on 9th, killing beans and nipping corn and potatoes.

Georgetown, Texas.—Snow nine inches deep on a level on 3d; remained two days; was the deepest snow ever known here in 30 years. Benefited wheat, and did no damage to stock.

Waco, Texas.—Light frosts on 27th and 28th; did no injury. The grasshoppers are hatching out in myriads. The ground is alive with them, and they are commencing their destructive work, so that famine is really feared.

Salado, Texas—Young grasshoppers in great numbers began to hatch about the 20th, and they are eating the vegetables in the gardens as fast as they come up. It is thought they will ruin the wheat in this section; probably the corn also as soon as it comes up. Spring weather since the 12th; martins appeared on the 26th.

Grenada, Miss.—Month unusually cold; vegetation backward; promise of a good fruit crop.

Memphis, Tenn.—No frost in ground, which is rather dry; navigation open. Peaches, quinces, and roses budding and leafing.

Chilesburg, Ky.—Snowed on nine days, but only once enough to measure.

Steubenville, Ohio.—River closed on 1st and opened on 12th. Frosts on 2d, 3d, 4th, 5th, 8th, 12th, 13th, 14th, and 21st.

Painesville, Ohio.—Thunder-storm at 9 p. m. on the 24th, but little rain fell.

Cleveland, Ohio.—Thunder-storm at 7.30 p. m. on 24th.

Wooster, Ohio.—Lightning in southwest at 7 p. m. on 24th. It snowed 11 days, rained on four days, and snowed and rained on two days, in February.

Norwalk, Ohio.—Coldest February since 1861; temperature more uniform than usual; snow nearly gone; ground frozen 24 inches.

Greenwich Station, Ohio.—Two bluebirds appeared on 4th, with thermometer 16°; 24 hours before, 13° below zero.

Williamsport, Ohio.—Thunder-storm from the west at 9 a. m. on the 24th.

Toledo, Ohio.—Colder than any February we have record of, and 7°.5 lower than the February average of nine years past.

Bowling Green, Ohio.—Driest winter in 30 years; springs and wells very low.

Urbana, Ohio.—The mean temperature more than 5° below the average of the month for several years, and 9°.5 below February of 1867.

Lansing, Mich.—Coldest February ever known here; by self-registering thermometer it was 37° below zero on the 2d.

Litchfield, Mich.—Coldest February in 19 years; good sleighing since January 3d.

Northport, Mich.—Probably the coldest February, as to steady cold, in 1[illegible] years. Swamps and streams very low.

Copper Falls, Mich.—Winter, thus far, unusually stormy and cold; snow fall 18 feet 5½ inches; now about six feet in the woods.

Aurora, Ind.—First robins seen on 15th.

Merom, Ind.—Coldest day of the month, 10th. Bluebirds seen on 12th; song sparrows on 17th.

Golconda, Ill.—Martins seen on 22d; weather open and pleasant; farmers have ploughed considerably for oats.

Aurora, Ill.—Month pleasant; little snow, but sleighing good. Fox river never known to be so low by the oldest inhabitants.

Sandwich, Ill.—On 25th, at 5 p. m., a gale, with cyclone (circling) movements; but little damage. At midnight following, frightful peals of thunder and fierce livid zigzag lightning, but rain not as severe as at the southeast, distant from here

Ottawa, Ill.—Thaw on the 12th; bluebirds singing on the 13th. The winter mild; no heavy snows, but few very hard frosts, and no heavy rains.

Hennepin, Ill.—Present prospects for fruit crops very good.

Magnolia, Ill.—Streams very low since last August; filling up on 15th and 16th; first bluebirds on 19th; prairie ground frozen two feet ten inches on 20th; wild geese flying on 25th.

Galesburg, Ill.—Month fine and most part warm, but great scarcity of water.

Wapello, Ill.—Wells still low from last season's drought.

Plymouth, Wis.—This February is 4° below the mean temperature of those of last four years.

Milwaukee, Wis.—Less than an average amount of rain for the last nine months.

Waupacca, Wis.—The 10th was the coldest day since New Year's 1864. On 23d, at midnight, in the midst of a northeast snow-storm, we had sharp lightning and distinct rolling thunder.

Embarrass, Wis.—Hardest snow-storm in eight years on 23d—25th.

Baraboo, Wis.—On 24th, at one a. m., high east wind with flash lightning and heavy thunder in the west for one hour.

Rocky Run, Wis.—Snow on 23d, day and evening, with gale from east and light thunder in the night. On the 24th, a. m., hail and large flakes of snow. On 10th lowest temperature (40°) for at least 10 years.

St. Paul, Minn.—Hail-storm during 23d, in which a shower of dust was deposited.

Minneapolis, Minn.—Ice in the Mississippi 27 inches thick.

Clinton, Iowa—Coldest morning in four years on 10th, varying from 25° to 34° below zero; bluebirds and crows seen on 20th; lightning in north at 9 p. m., and sharp lightning and heavy thunder in northwest at 11 p. m., with sleet on 23d; month steadily cold; one very cold day and two warm days; only a few days of sleighing.

Dubuque, Iowa.—Thunder-storm, with hail from south to north, at 9 a. m. to 11 p. m. on 23d.

Monticello, Iowa.—Farmers sowing wheat on 20th; thunder-storm from west to east, with abundance of thunder and lightning, and but little rain on same day.

Fort Madison, Wis.—Wild geese going north on 19th, 20th and 29th; farmers sowing spring wheat on 20th and 21st.

Guttenberg, Iowa.—Thunder-storm with hail from 3 to 9 p. m., on 23d.

Independence, Iowa, (five miles northeast of.)—Snow all gone on 17th; distant thunder and lightning, with rain, hail, and snow, on 23d.

Waterloo, Iowa.—No rain of any amount since July, 1867; no snow in

cember; neither fog nor thaw in January. Thunder and lightning southeast, t, and northeast, at 7 p. m. on 23d, but no rain here.

Algona, Iowa.—A pleasant month; since the 10th, spring-like; snow nearly ne.

Boonsboro, Iowa.—In over four months less than two inches of water (either n or melted snow;) small streams dry; wells failing; cisterns generally hausted.

Fontanelle, Iowa.—Raccoons chattering on nights of 17th to 20th; bluebirds d pewees seen on 24th and 25th.

Logan, Iowa.—From 11th to 25th weather mild, ground dry, and farmers wed wheat for the first time in February in ten years.

Fort Dodge, Iowa.—Farmers sowed spring wheat from 14th to 20th.

Muscatine, Iowa.—Coldest weather ever known here on 10th; first thunder d lightning this season on 23d.

Rolfe, Iowa.—Indian summer weather from 14th to 21st.